Fig 1A (ICP27 plasmid)

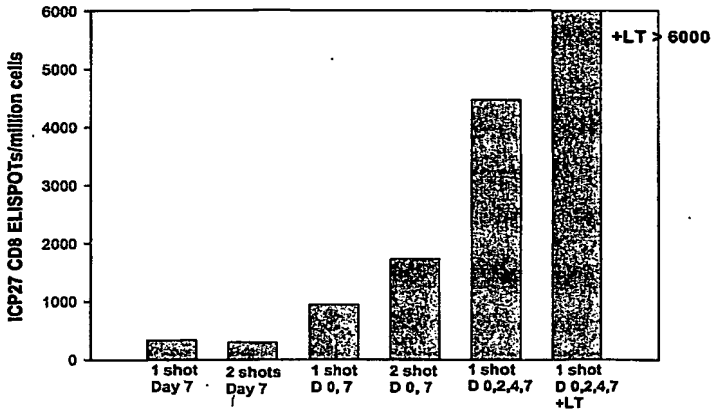

Fig 1B (PJV7630)

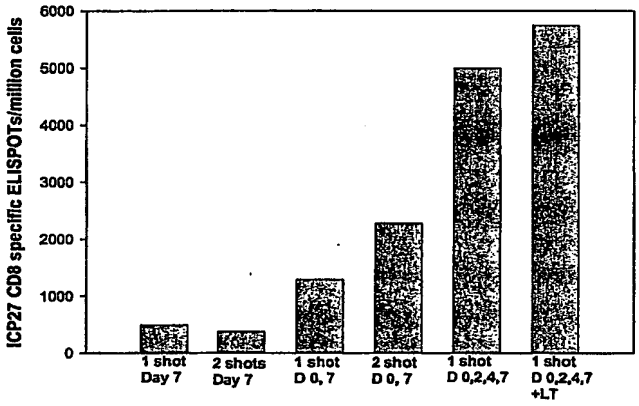

Fig 2A

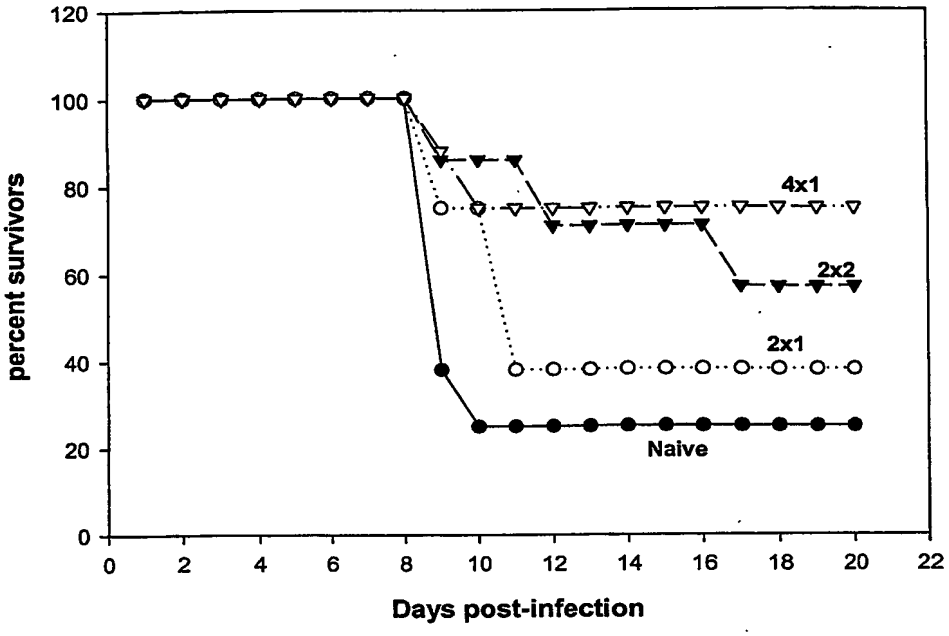
120
100
80
60
40
20
0
percent survivors
0
2
4
6
8
10
12
14
16
18
20
22
Days post-infection
4x1
2x2
2x1
Naive

Fig 2B.

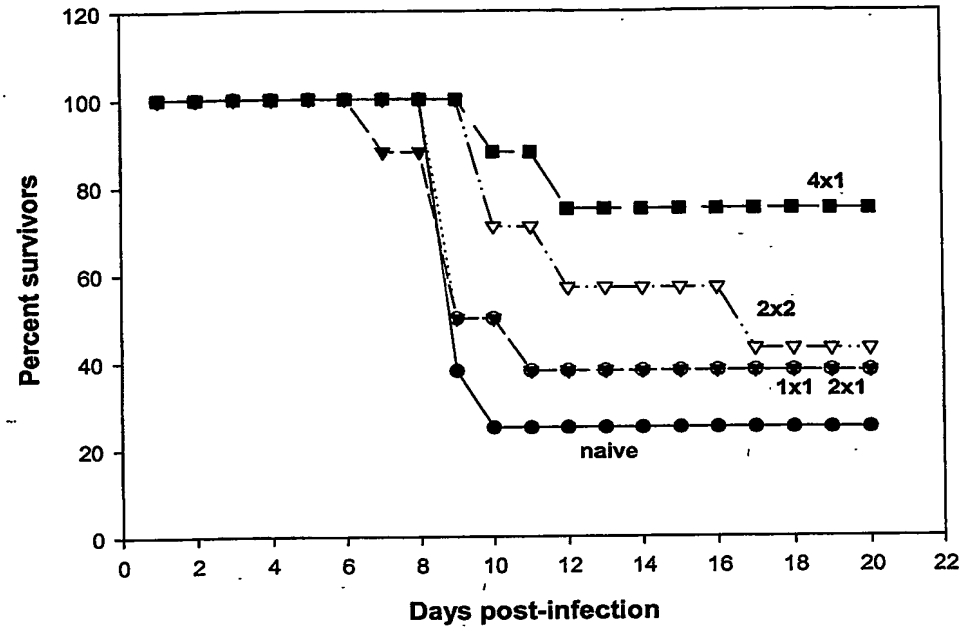
120
100
80
60
40
20
0
Percent survivors
0
2
4
6
8
10
12
14
16
18
20
22
Days post-infection
4x1
2x2
1x1
2x1
naive

Fig 2C

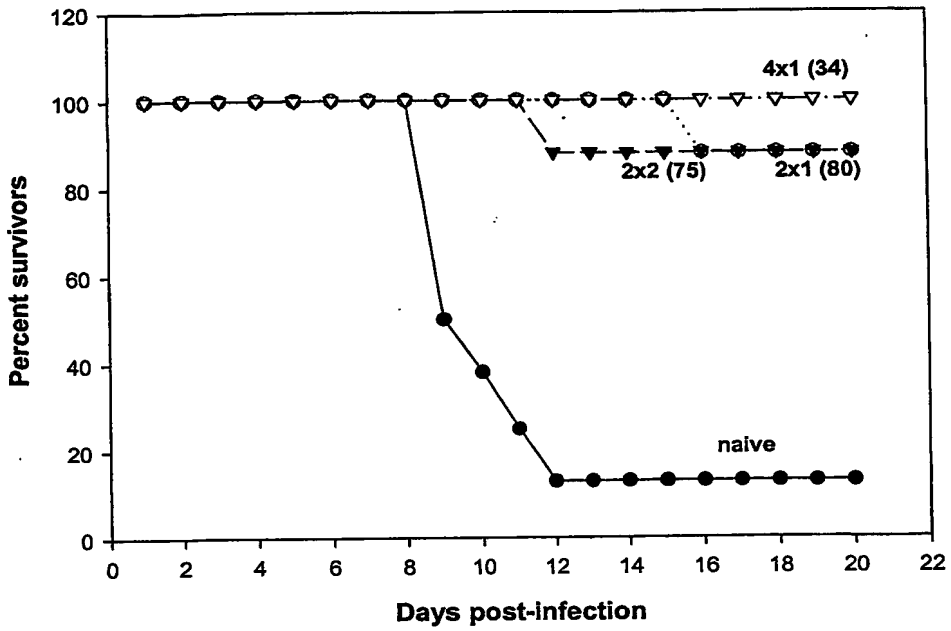
120
100
80
60
40
20
0
Percent survivors
0
2
4
6
8
10
12
14
16
18
20
22
Days post-infection
4x1 (34)
2x2 (75)
2x1 (80)
naive

Figure 3A

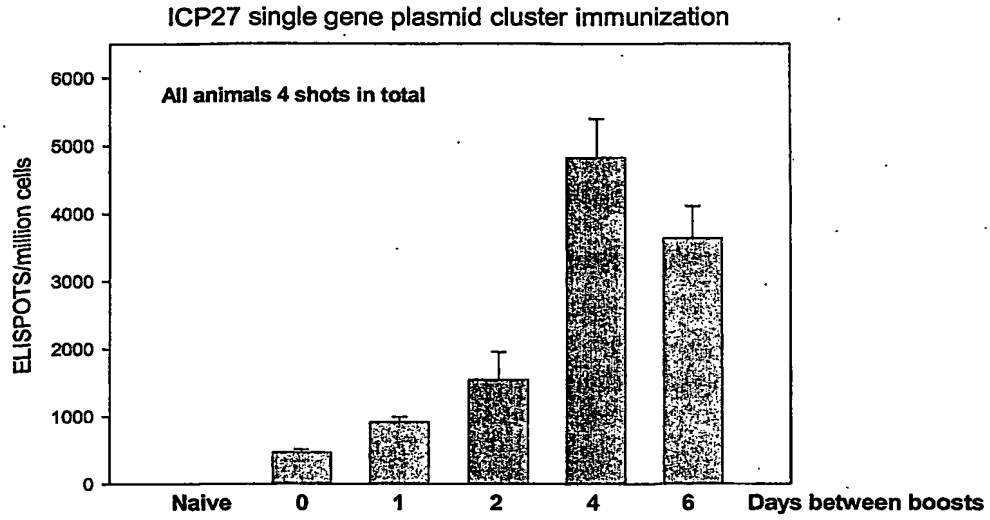

Figure 3B

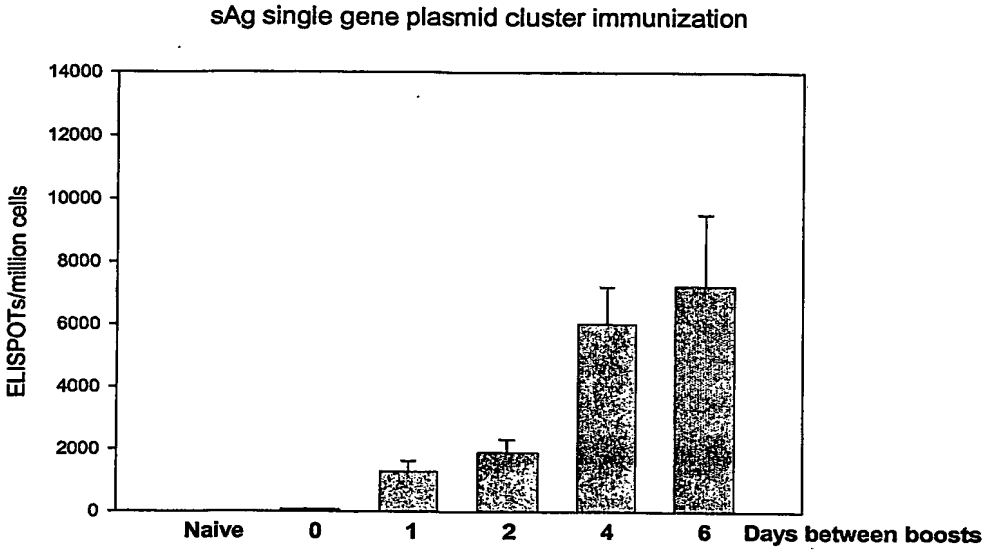

Figure 3C

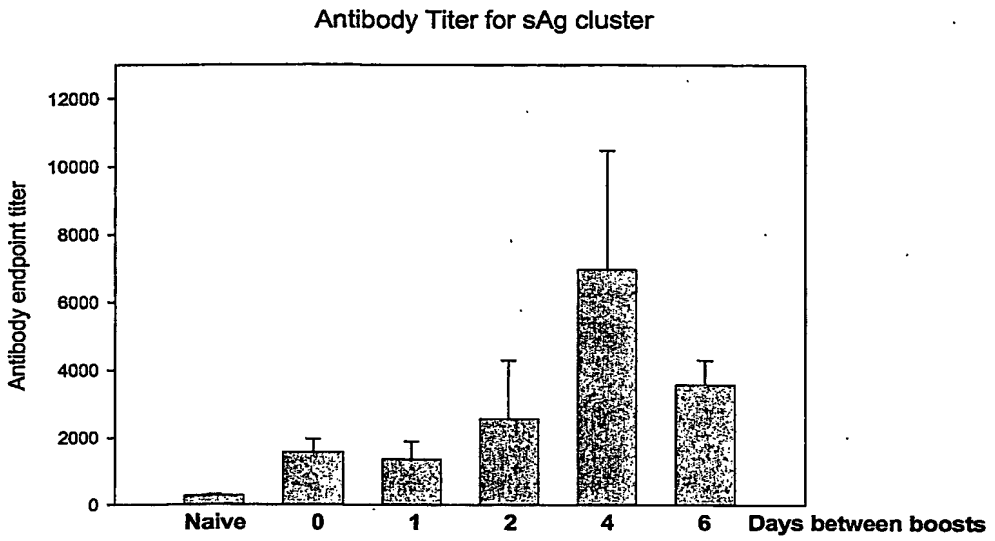

Figure 4A

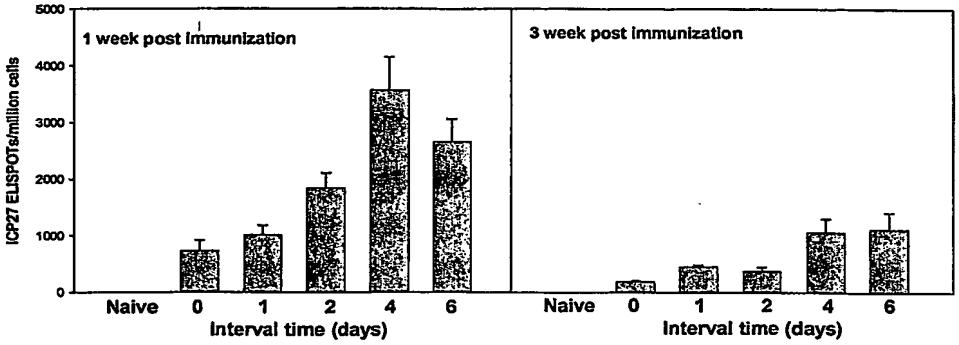

Figure 4B

Figure 5A

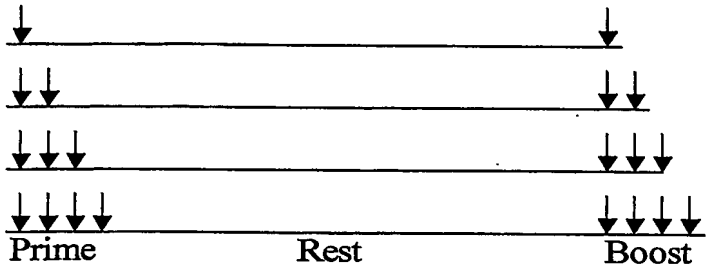

Figure 5B

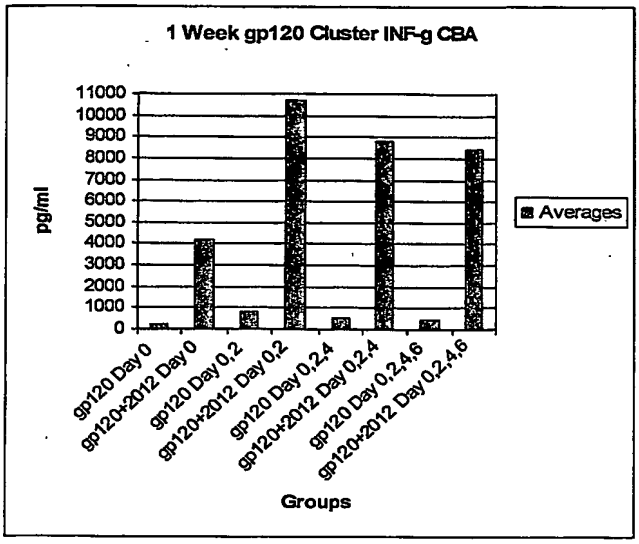
1 Week gp120 Cluster INF-g CBA
pg/ml
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Averages
gp120 Day 0
gp120+2012 Day 0
gp120 Day 0,2
gp120+2012 Day 0,2
gp120 Day 0,2,4
gp120+2012 Day 0,2,4
gp120 Day 0,2,4,6
gp120+2012 Day 0,2,4,6
Groups

Figure 5C

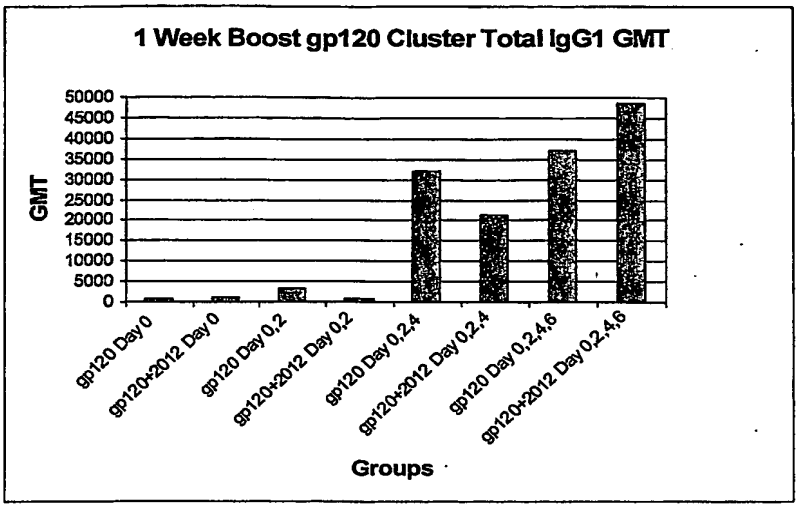
1 Week Boost gp120 Cluster Total IgG1 GMT
GMT
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
gp120 Day 0
gp120+2012 Day 0
gp120 Day 0,2
gp120+2012 Day 0,2
gp120 Day 0,2,4
gp120+2012 Day 0,2,4
gp120 Day 0,2,4,6
gp120+2012 Day 0,2,4,6
Groups

Figure 6A

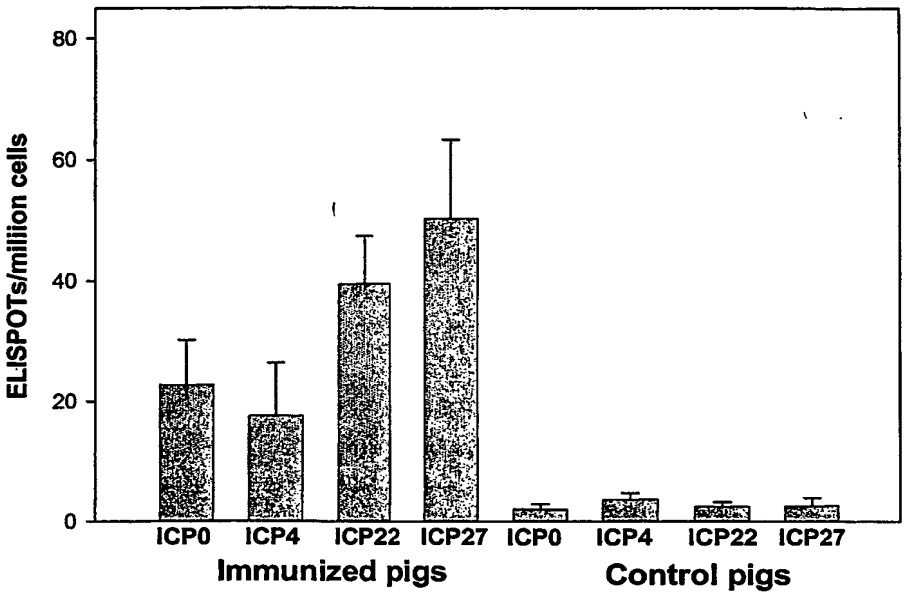

Figure 6B

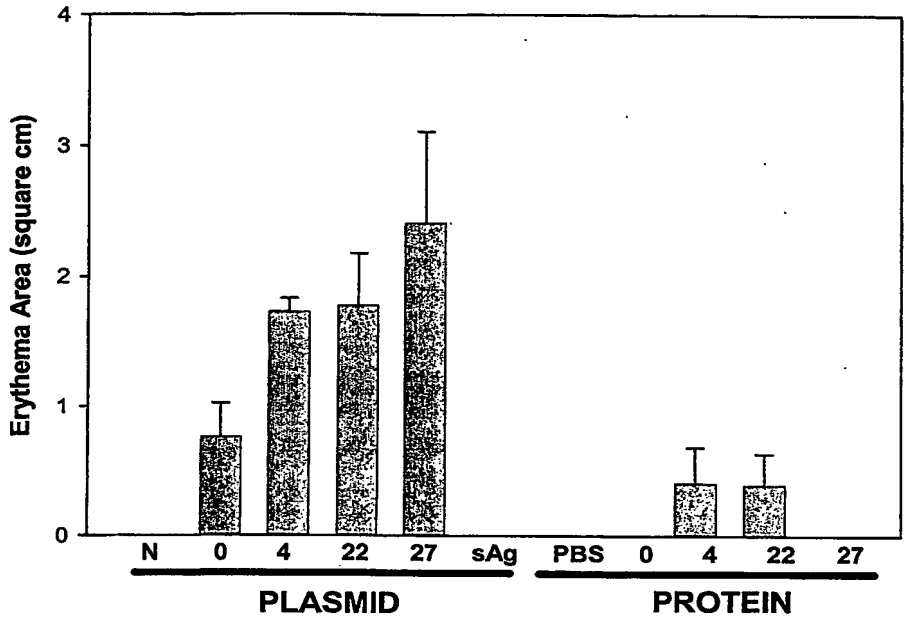

Figure 7

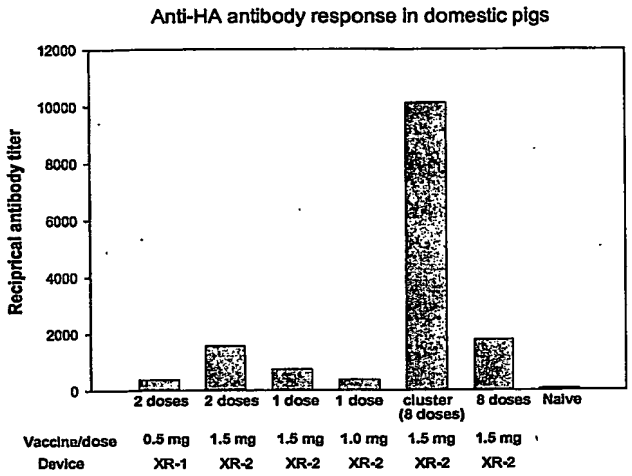

Figure 8

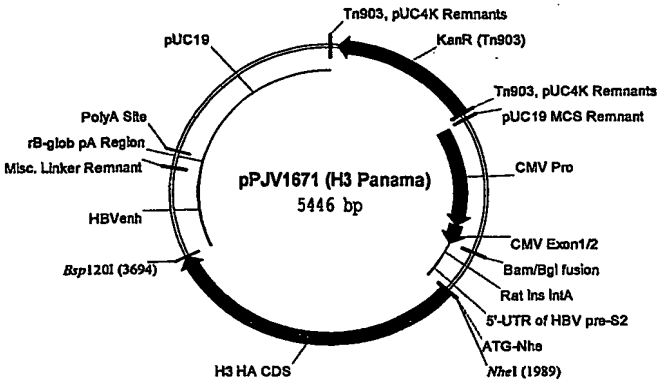
Tn903, pUC4K Remnants
KanR (Tn903)
Tn903, pUC4K Remnants
pUC19 MCS Remnant
CMV Pro
CMV Exon1/2
Bam/Bgl fusion
Rat Ins IntA
5'-UTR of HBV pre-S2
ATG-Nhe
NheI (1989)
H3 HA CDS
Bsp120I (3694)
HBVenh
Misc. Linker Remnant
rB-glob pA Region
PolyA Site
pUC19
pPJV1671 (H3 Panama)
5446 bp

Figure 9

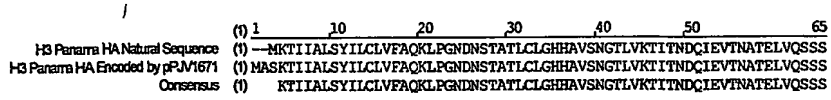
(1) 1 10 20 30 40 50 65
H3 Panama HA Natural Sequence (1) ---MKTIIALSYILCLVFAQKLPGNDNSTATLCLGHHAVSNGTLVKTITNDQIEVTNATELVQSSS
H3 Panama HA Encoded by pPJV1671 (1) MASKTIIALSYILCLVFAQKLPGNDNSTATLCLGHHAVSNGTLVKTITNDQIEVTNATELVQSSS
Consensus (1) KTIIALSYILCLVFAQKLPGNDNSTATLCLGHHAVSNGTLVKTITNDQIEVTNATELVQSSS

Figure 10

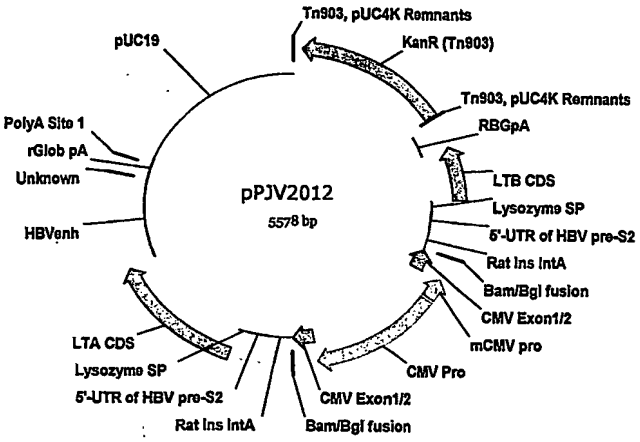
Tn903, pUC4K Remnants
KanR (Tn903)
Tn903, pUC4K Remnants
RBGpA
LTB CDS
Lysozyme SP
5'-UTR of HBV pre-S2
Rat Ins IntA
Bam/Bgl fusion
CMV Exon1/2
mCMV pro
CMV Pro
CMV Exon1/2
Bam/Bgl fusion
Rat Ins IntA
5'-UTR of HBV pre-S2
Lysozyme SP
LTA CDS
HBVenh
Unknown
rGlob pA
PolyA Site 1
pUC19
pPJV2012
5578 bp

Figure 11

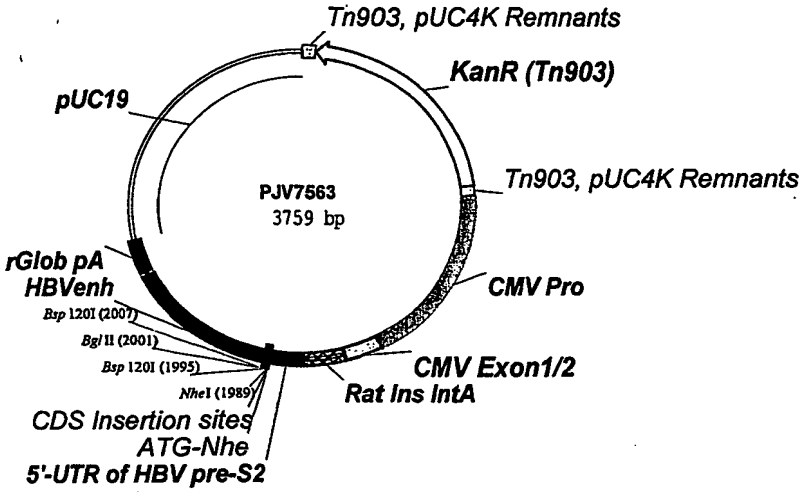
Tn903, pUC4K Remnants
KanR (Tn903)
pUC19
Tn903, pUC4K Remnants
PJV7563
3759 bp
rGlob pA
HBVenh
CMV Pro
Bsp 120I (2007)
Bgl II (2001)
Bsp 120I (1995)
NheI (1989)
CMV Exon1/2
Rat Ins IntA
CDS Insertion sites
ATG-Nhe
5'-UTR of HBV pre-S2

Figure 12

ggcgtaatgctctgccagtgttacaaccaattaaccaattctgattagaaaaactcatcgagcatcaaatgaaactgcaatttattcat
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Figure 13
Flowchart Derivitization of Plasmids PJV7563

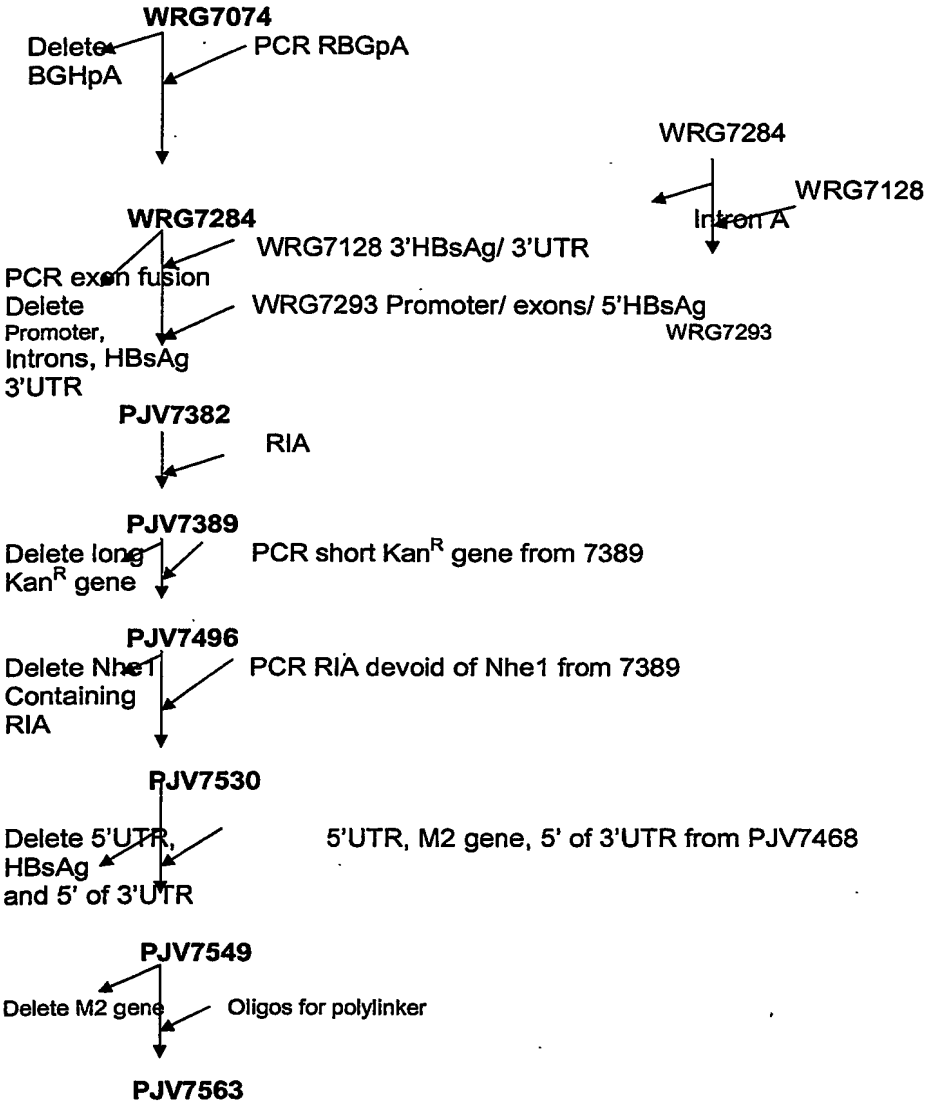
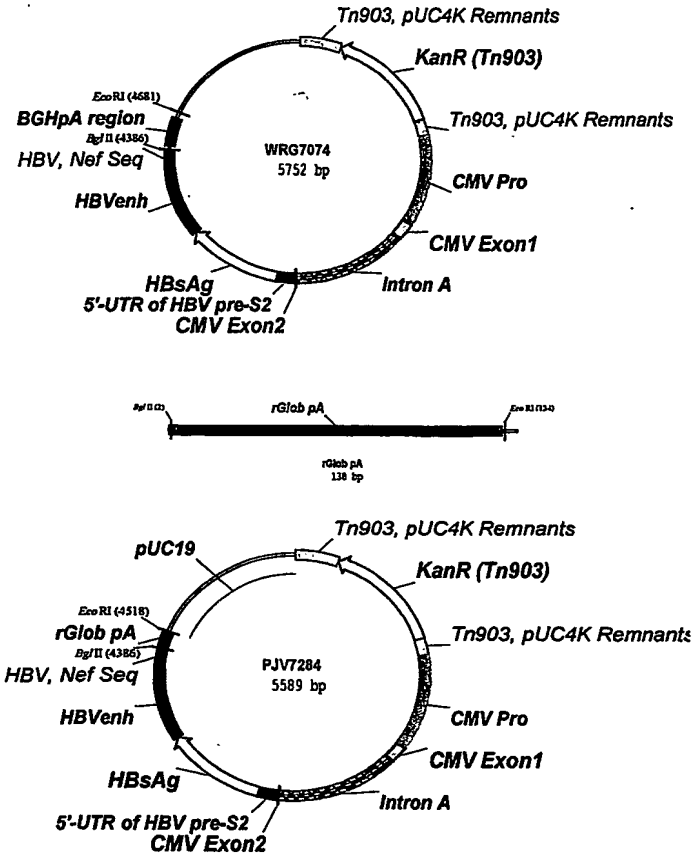
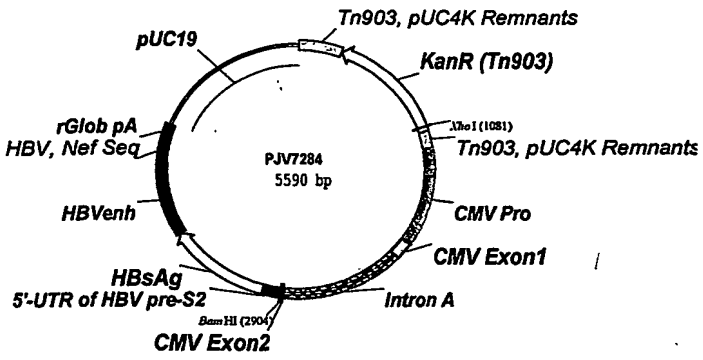
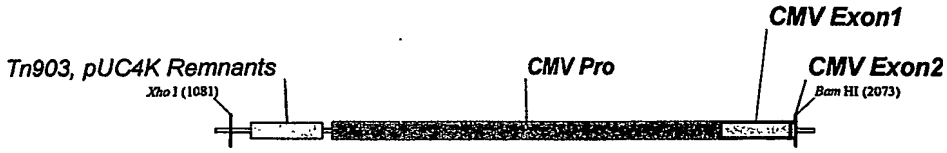


Figure 14 (i) – (viii)

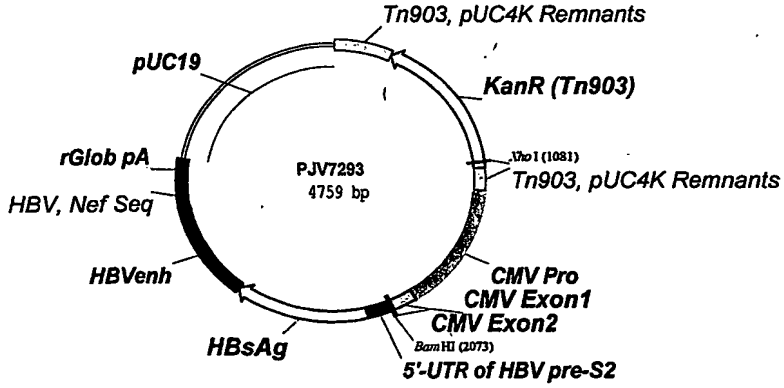
Feature Maps of Key Plasmids in Construction of pPJV7563

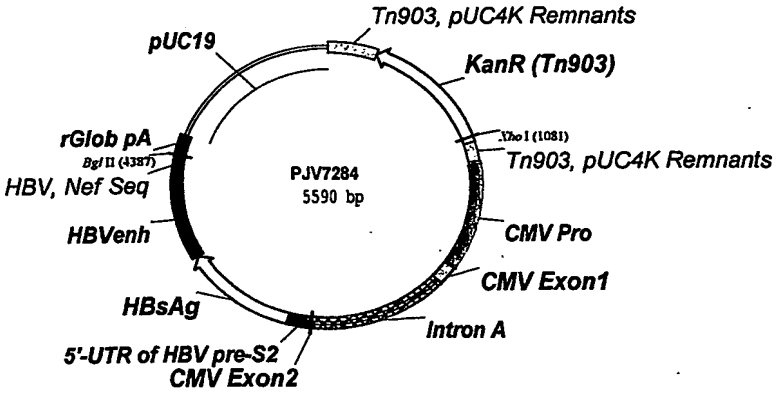


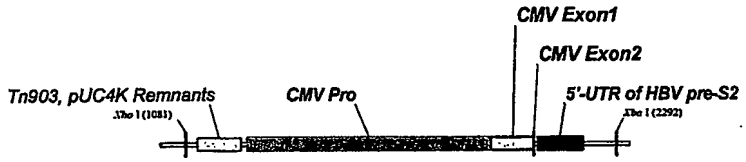




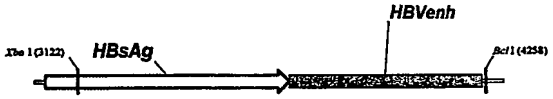
Fragment of WRG7128
1050 bp (molecule 4759 bp)



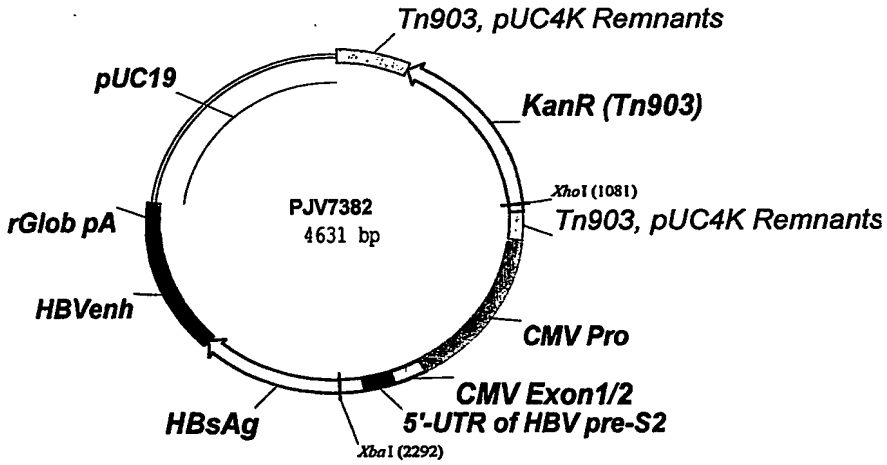


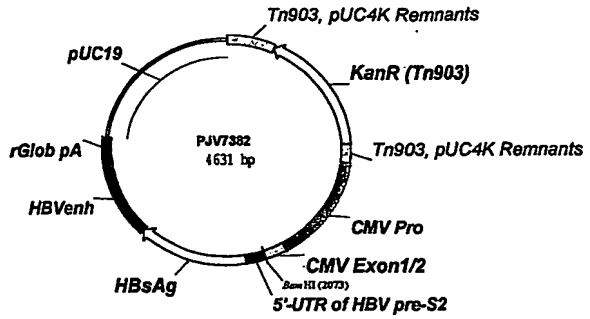


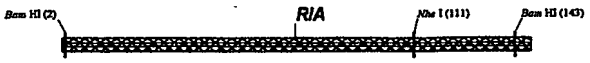
Fragment of PJV7293
1317 bp (molecule 4759 bp)



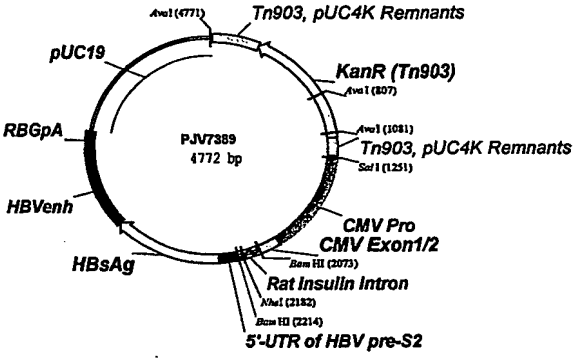
Fragment of PJV7128
1304 bp (molecule 5613 bp)

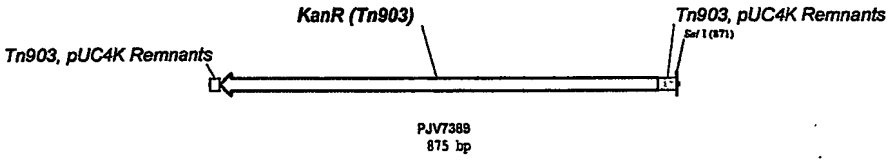




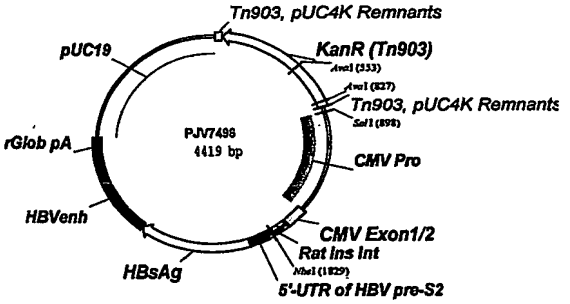


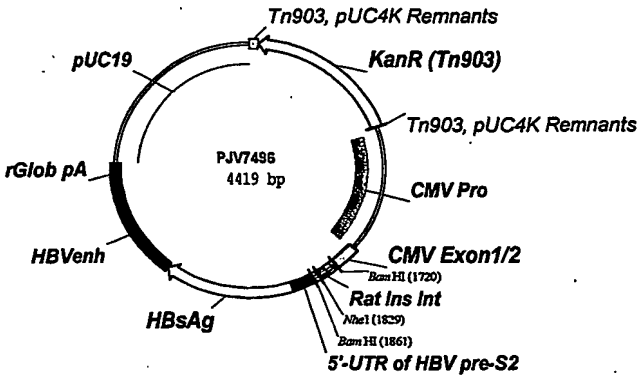
Rins Intron A
147 bp



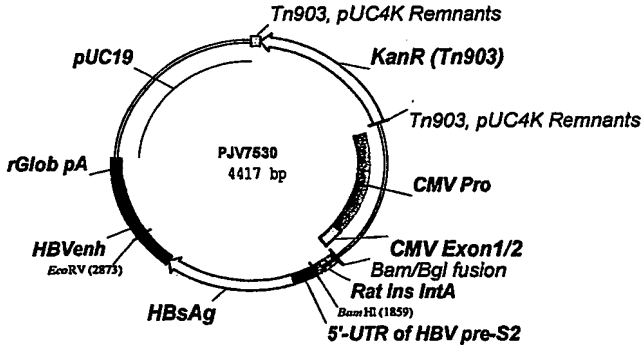


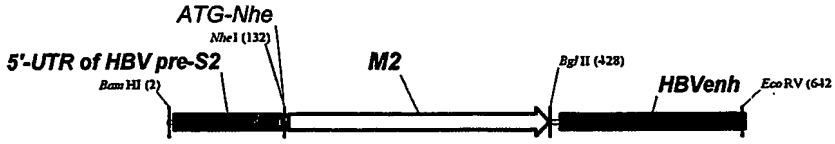
PJV7389
875 bp



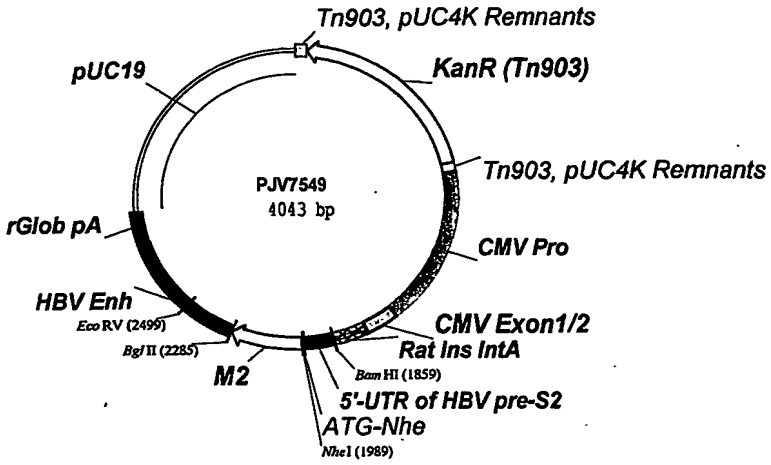


RIA dNhe Bgl/Bam
145 bp





PJV7468
644 bp


Tn903, pUC4K Remnants
pUC19
KanR (Tn903)
PJV7549
4043 bp
Tn903, pUC4K Remnants
rGlob pA
CMV Pro
HBV Enh
Eco RV (2499)
CMV Exon1/2
Bgl II (2285)
Rat Ins IntA
M2
Bam HI (1859)
5'-UTR of HBV pre-S2
ATG-Nhe
Nhe I (1989)

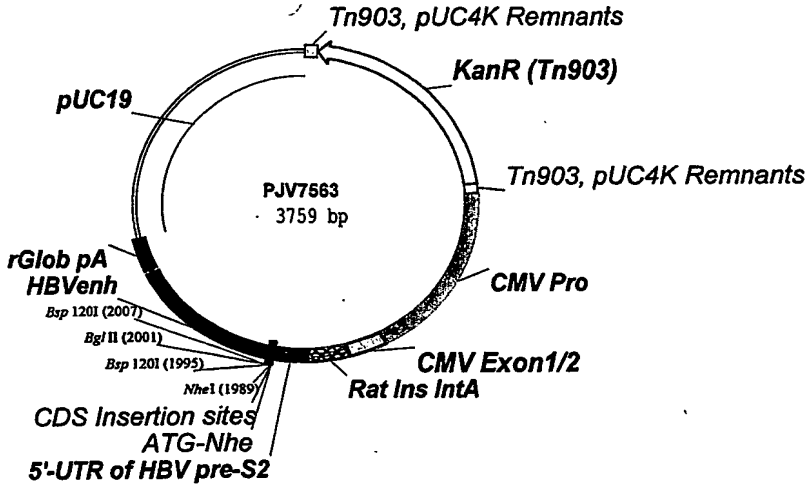

Tn903, pUC4K Remnants
KanR (Tn903)
pUC19
PJV7563
3759 bp
Tn903, pUC4K Remnants
rGlob pA
HBVenh
CMV Pro
Bsp 1201 (2007)
Bgl II (2001)
CMV Exon1/2
Bsp 1201 (1995)
Rat Ins IntA
Nhe I (1989)
CDS Insertion sites
ATG-Nhe
5'-UTR of HBV pre-S2

Figure 15
Flowchart Derivation of Plasmids WRG7074 and WRG7128

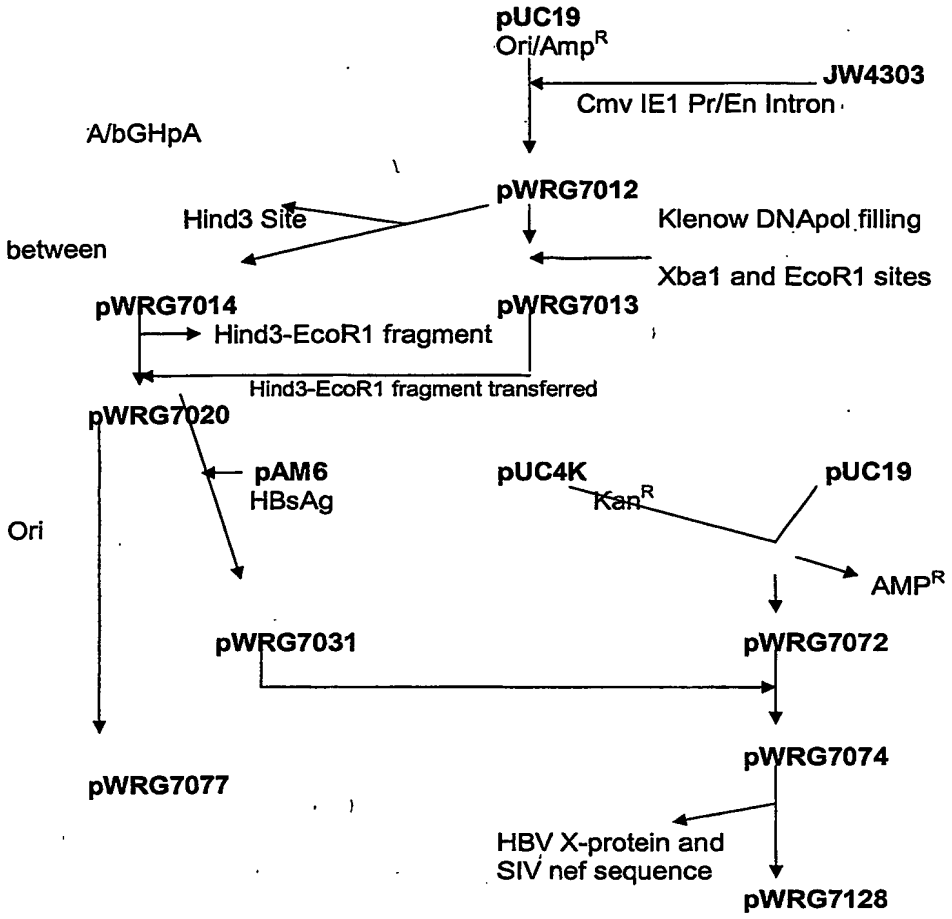
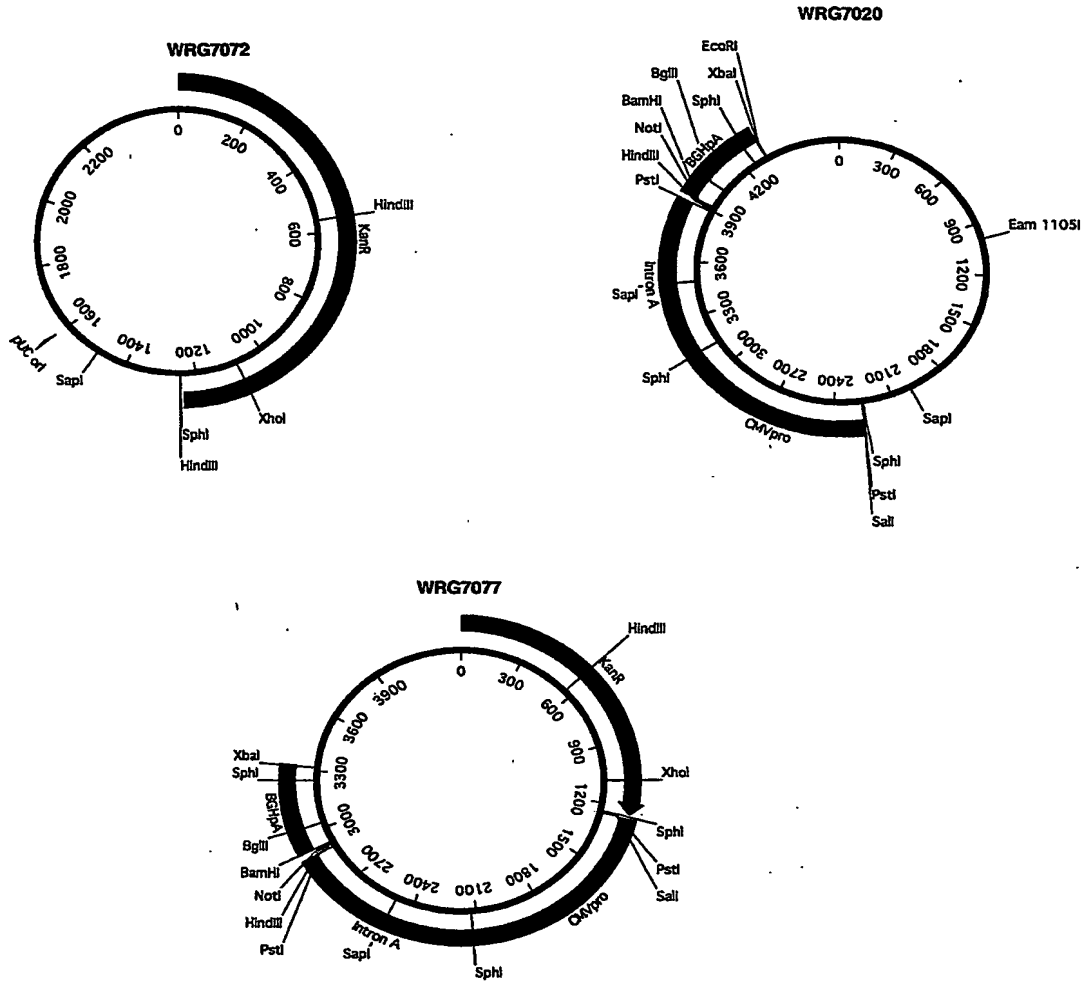
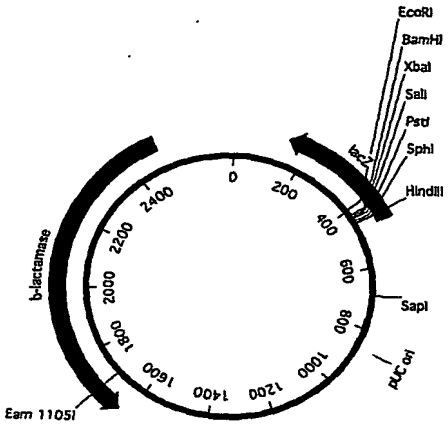


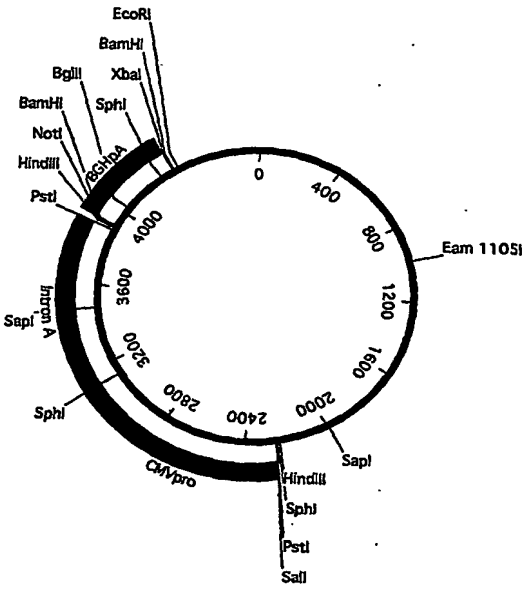
Figure 16 (i) to (v): Key Plasmid Features



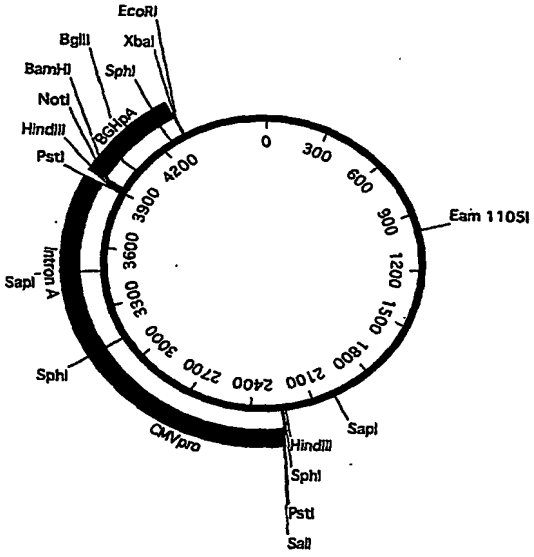
pUC 19



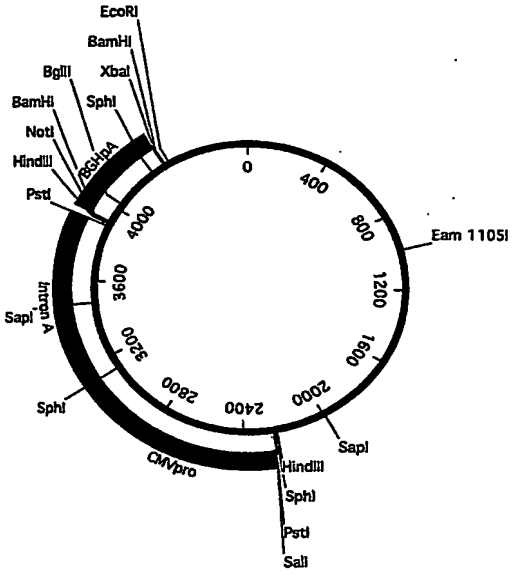
WRG7012



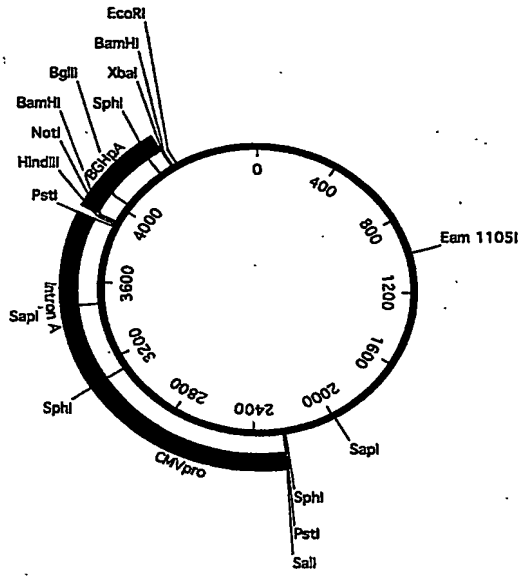
WRG7013



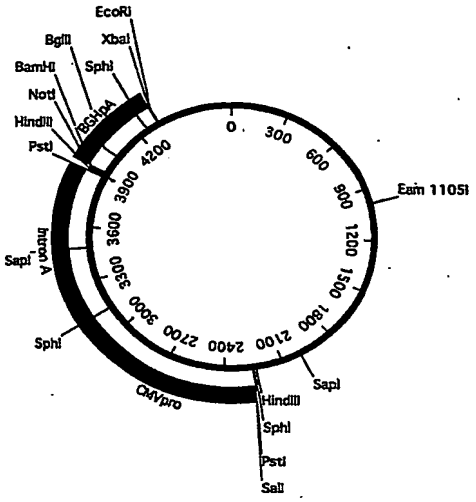
WRG7012



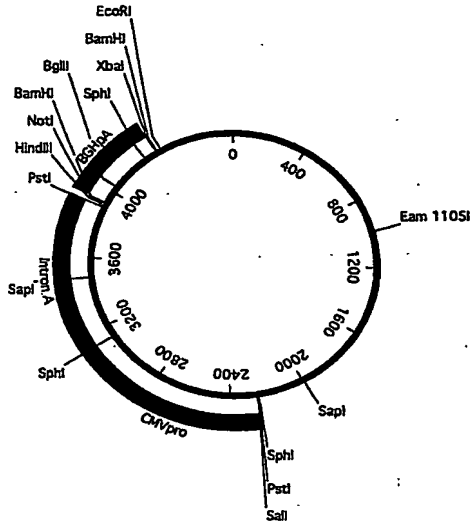
WRG7014



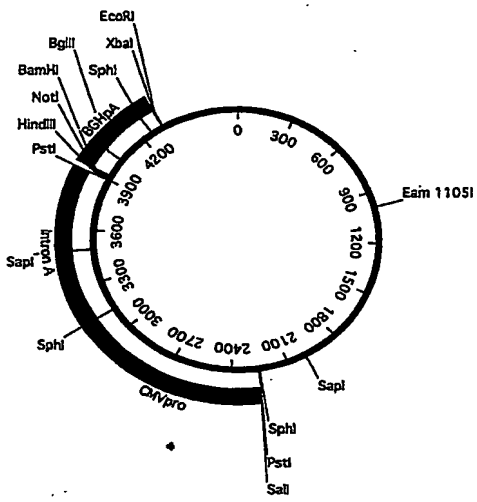
WRG7013



WRG7014



WRG7020



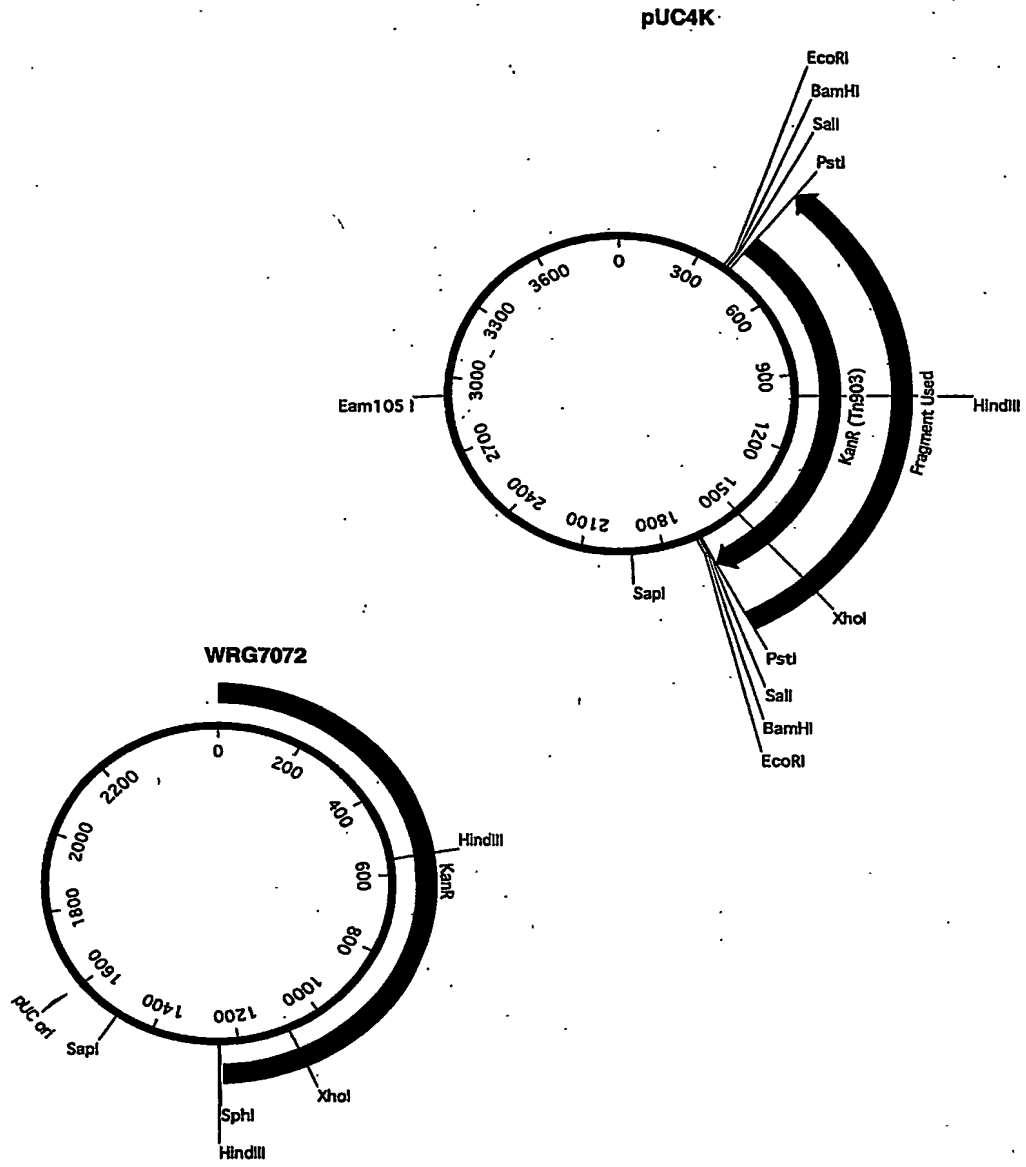
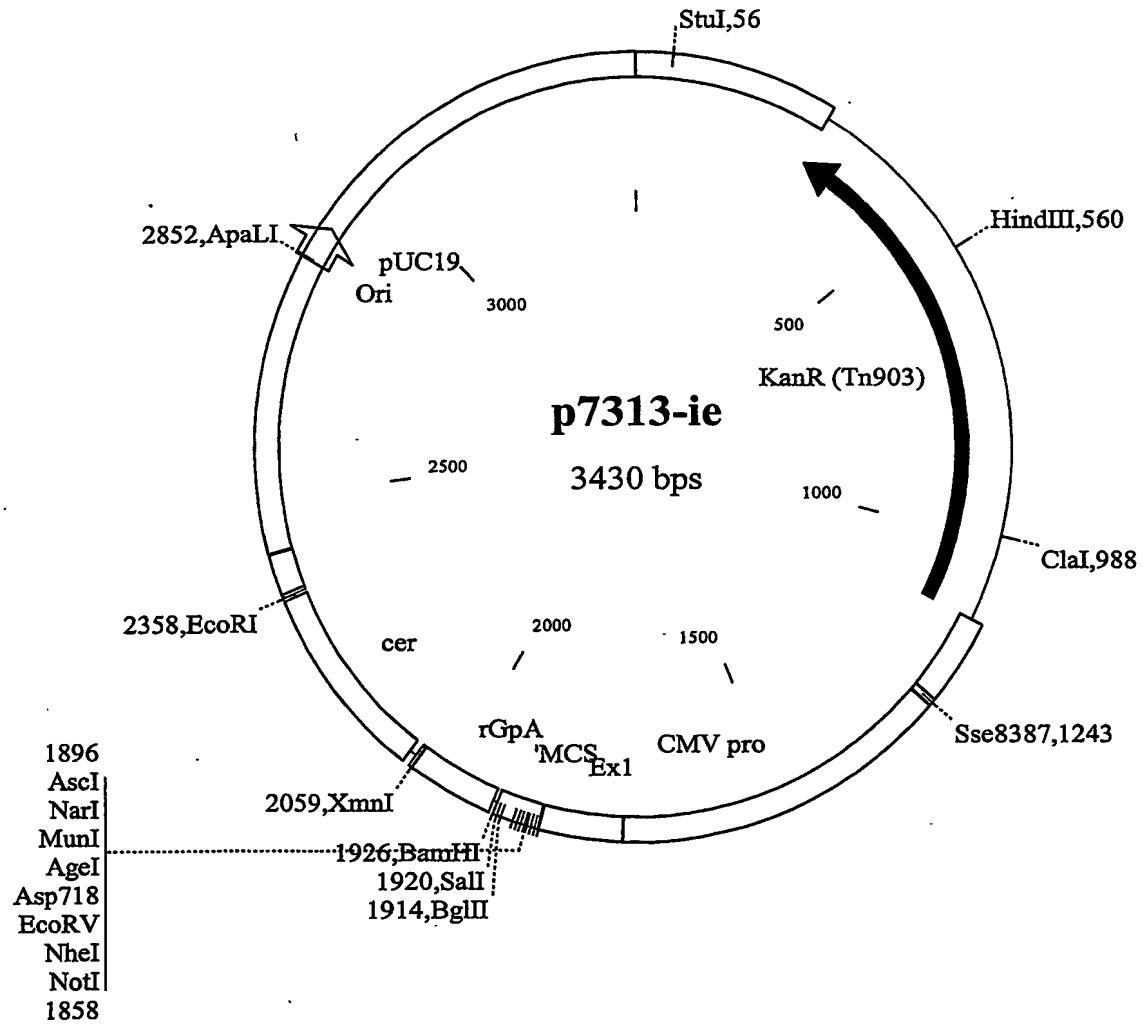

pUC4K
EcoRI
BamHI
SalI
PstI
0
300
600
900
1200
1500
1800
2100
2400
2700
3000
3300
3600
Eam105 I
SapI
KanR (Tn903)
Fragment Used
HindIII
XhoI
PstI
SalI
BamHI
EcoRI
WRG7072
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
HindIII
KanR
pUC ori
SapI
XhoI
SphI
HindIII

Figure 17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HindIII,560
ClaI,988
Sse8387,1243
CMV pro
Ex1
MCS
rGpA
2059,XmnI
1926,BamHI
1920,SalI
1914,BglII
1896
AscI
NarI
MunI
AgeI
Asp718
EcoRV
NheI
NotI
1858
2358,EcoRI
cer
2852,ApaLI
pUC19
Ori
3000
500
KanR (Tn903)
p7313-ie
3430 bps
2500
1000
2000
1500

Figure 18

Sequence of p55 gag insert in pGagOptrpr2

ATGGGTGCCCGAGCTTCGGTACTGTCTGGTGGAGAGCTGGACAGATGGGAGAAAATTAGGCT
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CAATTGCAGCCATCCCTCCAGACCGGGAGTGAAGAGCTGAGGTCCTTGTATAACACAGTGGC
TACCCTCTACTGCGTACACCAGAGGATCGAGATTAAGGATACCAAGGAGGCCTTGGACAAAA
TTGAGGAGGAGCAAAACAAGAGCAAGAAGAAGGCCCAGCAGGCAGCTGCTGACACTGGGCAT
AGCAACCAGGTATCACAGAACTATCCTATTGTCCAAAACATTCAGGGCCAGATGGTTCATCA
GGCCATCAGCCCCCGGACGCTCAATGCCTGGGTGAAGGTTGTCGAAGAGAAGGCCTTTTCTC
CTGAGGTTATCCCCATGTTCTCCGCTTTGAGTGAGGGGGCCACTCCTCAGGACCTCAATACA
ATGCTTAATACCGTGGGCGGCCATCAGGCCGCCATGCAAATGTTGAAGGAGACTATCAACGA
GGAGGCAGCCGAGTGGGACAGAGTGCATCCCGTCCACGCTGGCCCAATCGCGCCCGGACAGA
TGCGGGAGCCTCGCGGCTCTGACATTGCCGGCACCACCTCTACACTGCAAGAGCAAATCGGA
TGGATGACCAACAATCCTCCCATCCCAGTTGGAGAAATCTATAAACGGTGGATCATTCTCGG
TCTCAATAAAATTGTTAGAATGTACTCTCCGACATCCATCCTTGACATTAGACAGGGACCCA
AAGAGCCTTTTAGGGATTACGTCGACCGGTTTTATAAGACCCTGCGAGCAGAGCAGGCCTCT
CAGGAGGTCAAAAACTGGATGACGGAGACACTCCTGGTACAGAACGCTAACCCCGACTGCAA
AACAATCTTGAAGGCACTAGGCCCGGCTGCCACCCTGGAAGAGATGATGACCGCCTGTCAGG
GAGTAGGCGGACCCGGACACAAAGCCAGAGTGTTGGCCGAAGCCATGAGCCAGGTGACGAAC
TCCGCAACCATCATGATGCAGAGAGGGAACTTCCGCAATCAGCGGAAGATCGTGAAGTGTTT
CAATTGCGGCAAGGAGGGTCATACCGCCCGCAACTGTCGGGCCCCTAGGAAGAAAGGGTGTT
GGAAGTGCGGCAAGGAGGGACACCAGATGAAAGACTGTACAGAACGACAGGCCAATTTTCTT
GGAAAGATTTGGCCGAGCTACAAGGGGAGACCTGGTAATTTCCTGCAAAGCAGGCCCGAGCC
CACCGCCCCCCCTGAGGAATCCTTCAGGTCCGGAGTGGAGACCACAACGCCTCCCCAAAAAC
AGGAACCAATCGACAAGGAGCTGTACCCTTTAACTTCTCTGCGTTCTCTCTTTGGCAACGAC
CCGTCGTCTCAATAA

MGARASVLSG GELDRWEKIR LRPGGKKKYK LKHIVWASRE LERFAVNPGL
LETSEGCRQI LGQLQPSLQT GSEELRSLYN TVATLYCVHQ RIEIKDTKEA
LDKIEEEQNK SKKKAQQAAA DTGHSNQVSQ NYPIVQNIQG QMVHQAISPR
TLNAWVKVVE EKAFSPEVIP MFSALSEGAT PQDLNTMLNT VGGHQAAMQM
LKETINEEAA EWDRVHPVHA GPIAPGQMRE PRGSDIAGTT STLQEQIGWM
TNNPPIPVGE IYKRWIILGL NKIVRMYSPT SILDIRQGPK EPFRDYVDRF
YKTLRAEQAS QEVKNWMTET LLVQNANPDC KTILKALGPA ATLEEMMTAC
QGVGGPGHKA RVLAEAMSQV TNSATIMMQR GNFRNQRKIV KCFNCGKEGH
TARNCRAPRK KGCWKCGKEG HQMKD

CTERQ ANFLGKIWPS YKGRPGNFLQ

SRPEPTAPPE ESFRSGVETT TPPQKQEPID KELYPLTSLR SLFGNDPSSQ
*

Figure 19

Sequence of the p17/24trNEF insert in p17/24trNEF1

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AACGATTCGCAGTTAATCCTGGCCTGTTAGAAACATCAGAAGGCTGTAGACAAATACTGGGA
CAGCTACAACCATCCCTTCAGACAGGATCAGAAGAACTTAGATCATTATATAATACAGTAGC
AACCCTCTATTGTGTGCATCAAAGGATAGAGATAAAAGACACCAAGGAAGCTTTAGACAAGA
TAGAGGAAGAGCAAAACAAAAGTAAGAAAAAAGCACAGCAAGCAGCAGCTGACACAGGACAC
AGCAATCAGGTCAGCCAAAATTACCCTATAGTGCAGAACATCCAGGGGCAAATGGTACATCA
GGCCATATCACCTAGAACTTTAAATGCATGGGTAAAAGTAGTAGAAGAGAAGGCTTTCAGCC
CAGAAGTGATACCCATGTTTTCAGCATTATCAGAAGGAGCCACCCCACAAGATTTAAACACC
ATGCTAAACACAGTGGGGGGACATCAAGCAGCCATGCAAATGTTAAAAGAGACCATCAATGA
GGAAGCTGCAGAATGGGATAGAGTGCATCCAGTGCATGCAGGGCCTATTGCACCAGGCCAGA
TGAGAGAACCAAGGGGAAGTGACATAGCAGGAACTACTAGTACCCTTCAGGAACAAATAGGA
TGGATGACAAATAATCCACCTATCCCAGTAGGAGAAATTTATAAAAGATGGATAATCCTGGG
ATTAAATAAAATAGTAAGAATGTATAGCCCTACCAGCATTCTGGACATAAGACAAGGACCAA
AAGAACCCTTTAGAGACTATGTAGACCGGTTCTATAAAACTCTAAGAGCCGAGCAAGCTTCA
CAGGAGGTAAAAAATTGGATGACAGAAACCTTGTTGGTCCAAAATGCGAACCCAGATTGTAA
GACTATTTTAAAAGCATTGGGACCAGCGGCTACACTAGAAGAAATGATGACAGCATGTCAGG
GAGTAGGAGGACCCGGCCATAAGGCAAGAGTTTTGGTGGGTTTTCCAGTCACACCTCAGGTA
CCTTTAAGACCAATGACTTACAAGGCAGCTGTAGATCTTAGCCACTTTTTAAAAGAAAAGGG
GGGACTGGAAGGGCTAATTCACTCCCAAAGAAGACAAGATATCCTTGATCTGTGGATCTACC
ACACACAAGGCTACTTCCCTGATTGGCAGAACTACACACCAGGGCCAGGGGTCAGATATCCA
CTGACCTTTGGATGGTGCTACAAGCTAGTACCAGTTGAGCCAGATAAGGTAGAAGAGGCCAA
TAAAGGAGAGAACACCAGCTTGTTACACCCTGTGAGCCTGCATGGGATGGATGACCCGGAGA
GAGAAGTGTTAGAGTGGAGGTTTGACAGCCACCTAGCATTTCATCACGTGGCCCGAGAGCTG
CATCCGGAGTACTTCAAGAACTGCTGA

MGARASVLSG GELDRWEKIR LRPGGKKKYK LKHIVWASRE LERFAVNPGL
LETSEGCRQI LGQLQPSLQT GSEELRSLYN TVATLYCVHQ RIEIKDTKEA
LDKIEEEQNK SKKKAQQAAA DTGHSNQVSQ NYPIVQNIQG QMVHQAISPR
TLNAWVKVVE EKAFSPEVIP MFSALSEGAT PQDLNTMLNT VGGHQAAMQM
LKETINEEAA EWDRVHPVHA GPIAPGQMRE PRGSDIAGTT STLQEQIGWM

TNNPPIPVGE IYKRWIILGL
NK
IVRMYSPT SILDIRQGPK EPFRDYVDRF
YKTLRAEQAS QEVKNWMTET LLVQNANPDC KTILKALGPA ATLEEMMTAC
QGVGGPGHKA RVLVGFPVTP QVPLRPMTYK AAVDLSHFLK EKGGLEGLIH
SQRRQDILDL WIYHTQGYFP DWQNYTPGPG VRYPLTFGWC YKLVPVEPDK
VEEANKGENT SLLHPVSLHG MDDPEREVLE WRFDSHLAFH HVARELHPEY
FKNC*

Figure 20

Sequence of the p17/24opt/trNef insert in p17/24opt/trNef1

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GCGCCCGGGAGGCAAAAAGAAATACAAGCTCAAGCATATCGTGTGGGCCTCGAGGGAGCTTG
AACGGTTTGCCGTGAACCCAGGCCTGCTGGAAACATCTGAGGGATGTCGCCAGATCCTGGGG
CAATTGCAGCCATCCCTCCAGACCGGGAGTGAAGAGCTGAGGTCCTTGTATAACACAGTGGC
TACCCTCTACTGCGTACACCAGAGGATCGAGATTAAGGATACCAAGGAGGCCTTGGACAAAA
TTGAGGAGGAGCAAAACAAGAGCAAGAAGAAGGCCCAGCAGGCAGCTGCTGACACTGGGCAT
AGCAACCAGGTATCACAGAACTATCCTATTGTCCAAAACATTCAGGGCCAGATGGTTCATCA
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ATGCTTAATACCGTGGGCGGCCATCAGGCCGCCATGCAAATGTTGAAGGAGACTATCAACGA
GGAGGCAGCCGAGTGGGACAGAGTGCATCCCGTCCACGCTGGCCCAATCGCGCCCGGACAGA
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TGGATGACCAACAATCCTCCCATCCCAGTTGGAGAAATCTATAAACGGTGGATCATTCTCGG
TCTCAATAAAATTGTTAGAATGTACTCTCCGACATCCATCCTTGACATTAGACAGGGACCCA
AAGAGCCTTTTAGGGATTACGTCGACCGGTTTTATAAGACCCTGCGAGCAGAGCAGGCCTCT
CAGGAGGTCAAAAACTGGATGACGGAGACACTCCTGGTACAGAACGCTAACCCCGACTGCAA
AACAATCTTGAAGGCACTAGGCCCGGCTGCCACCCTGGAAGAGATGATGACCGCCTGTCAGG
GAGTAGGCGGACCCGGACACAAAGCCAGAGTGTTGATGGTGGGTTTTCCAGTCACACCTCAG
GTACCTTTAAGACCAATGACTTACAAGGCAGCTGTAGATCTTAGCCACTTTTTAAAAGAAAA
GGGGGGACTGGAAGGGCTAATTCACTCCCAAAGAAGACAAGATATCCTTGATCTGTGGATCT
ACCACACACAAGGCTACTTCCCTGATTGGCAGAACTACACACCAGGGCCAGGGGTCAGATAT
CCACTGACCTTTGGATGGTGCTACAAGCTAGTACCAGTTGAGCCAGATAAGGTAGAAGAGGC
CAATAAAGGAGAGAACACCAGCTTGTTACACCCTGTGAGCCTGCATGGGATGGATGACCCGG
AGAGAGAAGTGTTAGAGTGGAGGTTTGACAGCCACCTAGCATTTCATCACGTGGCCCGAGAG
CTGCATCCGGAGTACTTCAAGAACTGCTGA

MGARASVLSG GELDRWEKIR LRPGGKKKYK LKHIVWASRE LERFAVNPGL

LETSEGCRQI LGQLQPSLQT GSEELRSLYN TVATLYCVHQ RIEIKDTKEA
LDKIEEEQNK SKKKAQ
QAAA DTG
HSNQVSQ NYPIVQNIQG QMVHQAISPR
TLNAWVKVVE EKAFSPEVIP MFSALSEGAT PQDLNTMLNT VGGHQAAMQM
LKETINEEAA EWDRVHPVHA GPIAPGQMRE PRGSDIAGTT STLQEQIGWM
TNNPPIPVGE IYKRWIILGL NKIVRMYSPT SILDIRQGPK EPFRDYVDRF
YKTLRAEQAS QEVKNWMTET LLVQNANPDC KTILKALGPA ATLEEMMTAC
QGVGGPGHKA RVLMVGFPVT PQVPLRPMTY KAAVDLSHFL KEKGGLEGLI
HSQRRQDILD LWIYHTQGYF PDWQNYTPGP GVRYPLTFGW CYKLVPVEPD
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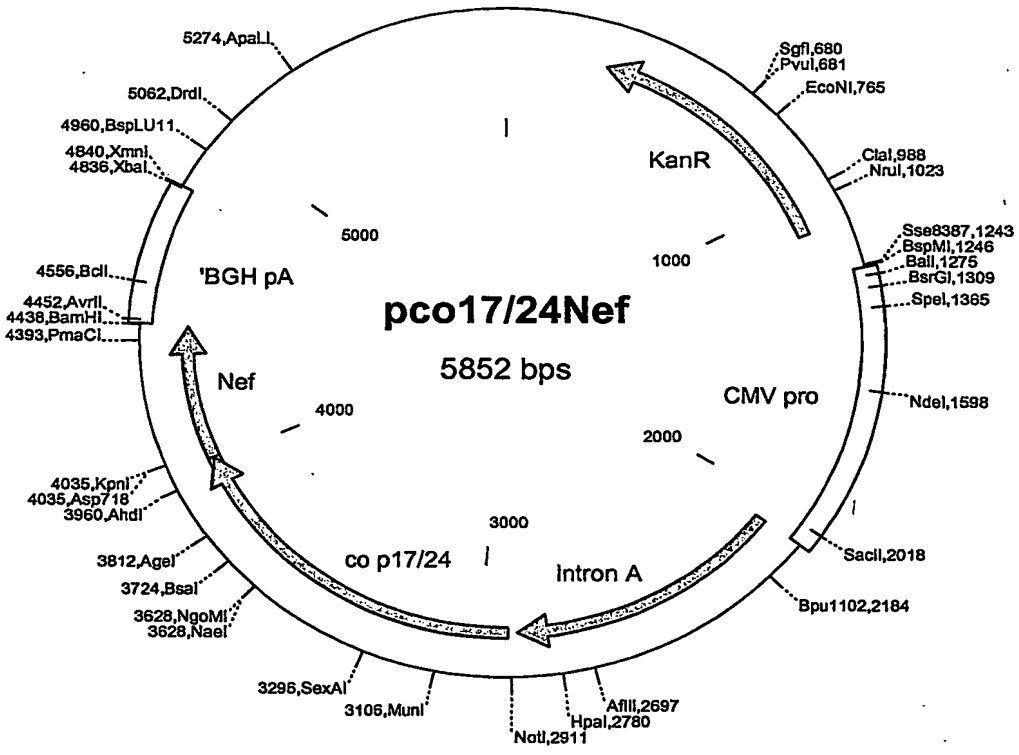

Figure 21

Sequence of RT insert of p7077-RT3:

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TTTGCCATCAAGAAGAAGGACAGCACCAAGTGGCGCAAGCTGGTGGATTTCCGGGAGCTGAA
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AGAAGAAGAGCGTGACCGTGCTGGACGTGGGCGACGCTTACTTCAGCGTCCCTCTGGACGAG
GACTTTAGAAAGTACACCGCCTTTACCATCCCATCTATCAACAACGAGACCCCTGGCATCAG
ATATCAGTACAACGTCCTCCCCCAGGGCTGGAAGGGCTCTCCCGCCATTTTCCAGAGCTCCA
TGACCAAGATCCTGGAGCCGTTTCGGAAGCAGAACCCCGATATCGTCATCTACCAGTACATG
GACGACCTGTACGTGGGCTCTGACCTGGAAATCGGGCAGCATCGCACGAAGATTGAGGAGCT
GAGGCAGCATCTGCTGAGATGGGGCCT
GACCAC
TCCGGACAAGAAGCATCAGAAGGAGCCGCCATTCCTGTGGATGGGCTACGAGCTCCATCCCG
ACAAGTGGACCGTGCAGCCTATCGTCCTCCCCGAGAAGGACAGCTGGACCGTGAAC
GACATCCAGAAGCTGGTGGGCAAGCTCAACTGGGCTAGCCAGATCTATCCCGGGATCAAGGT
GCGCCAGCTCTGCAAGCTGCTGCGCGGCACCAAGGCCCTGACCGAGGTGATTCCCCTCACGG
AGGAAGCCGAGCTCGAGCTGGCTGAGAACCGGGAGATCCTGAAGGAGCCCGTGCACGGCGTG
TACTATGACCCCTCCAAGGACCTGATCGCCGAAATCCAGAAGCAGGGCCAGGGGCAGTGGAC
ATACCAGATTTACCAGGAGCCTTTCAAGAACCTCAAGACCGGCAAGTACGCCCGCATGAGGG
GCGCCCACACCAACGATGTCAAGCAGCTGACCGAGGCCGTCCAGAAGATCACGACCGAGTCC
ATCGTGATCTGGGGGAAGACACCCAAGTTCAAGCTGCCTATCCAGAAGGAGACCTGGGAGAC
GTGGTGGACCGAATATTGGCAGGCCACCTGGATTCCCGAGTGGGAGTTCGTGAATACACCTC
CTCTGGTGAAGCTGTGGTACCAGCTCGAGAAGGAGCCCATCGTGGGCGCGGAGACATTCTAC
GTGGACGGCGCGGCCAACCGCGAAACAAAGCTCGGGAAGGCCGGGTACGTCACCAACCGGGG
CCGCCAGAAGGTCGTCACCCTGACCGACACCACCAACCAGAAGACGGAGCTGCAGGCCATCT
ATCTCGCTCTCCAGGACTCCGGCCTGGAGGTGAACATCGTGACGGACAGCCAGTACGCGCTG
GGCATTATTCAGGCCCAGCCGGACCAGTCCGAGAGCGAACTGGTGAACCAGATTATCGAGCA
GCTGATCAAGAAAGAGAAGGTCTACCTCGCCTGGGTCCCGGCCCATAAGGGCATTGGCGGCA
ACGAGCAGGTCGACAAGCTGGTGAGTGCGGGGATTAGAAAGGTGCTGTAA

MGPISPIETV SVKLKPGMDG PKVKQWPLTE EKIKALVEIC TEMEKEGKIS
KIGPENPYNT PVFAIKKKDS TKWRKLVDFR ELNKRTQDFW EVQLGIPHPA
GLKKKKSVTV LDVGDAYFSV PLDEDFRKYT AFTIPSINNE TPGIRYQYNV
LPQGWKGSPA IFQSSMTKIL EPFRKQNPDI VIYQYMDDLY VGSDLEIGQH
RTKIEELRQH LLRWGLTTPD KKHQKEPPFL WMGYELHPDK WTVQPIVLPE
KDSWTVNDIQ KLVGKLNWAS QIYPGIKVRQ LCKLLRGTKA LTEVIPLTEE
AELELAENRE ILKEPVHGVY YDPSKDLIAE IQKQGQGQWT YQIYQEPFKN
LKTGKYARMR GAHTNDVKQL TEAVQKITTE SIVIWGKTPK FKLPIQKETW
ETWWTEYWQA TWIPEWEFVN TPPLVKLWYQ LEKEPIVGAE TFYVDGAANR

ETKLGKAGYV TNRGRQKVVT LTDTTNQKTE LQAIYLALQD SGLEVNIVTD
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DKLVSAGIRK VL*

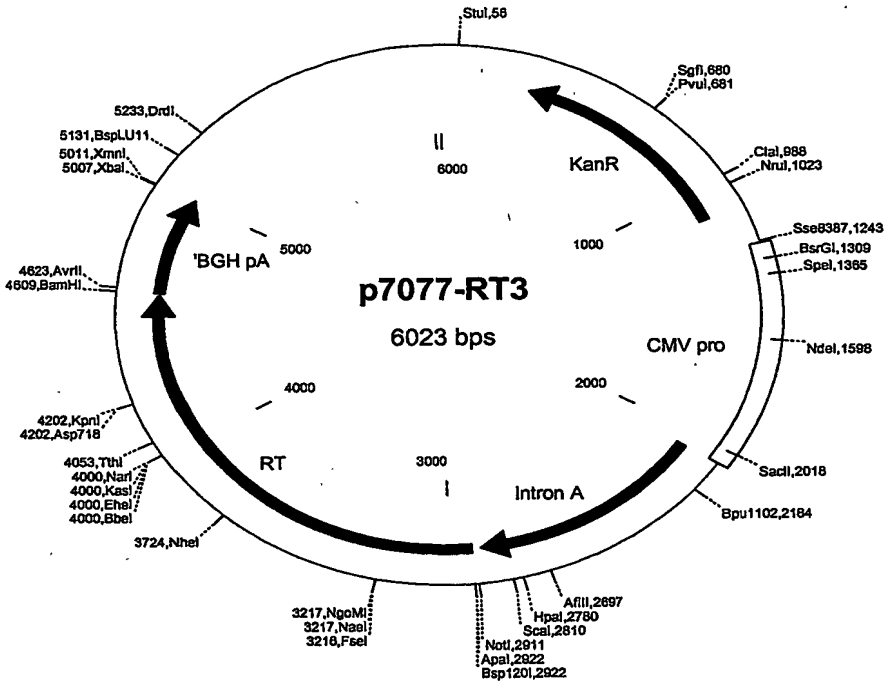

Figure 22

Sequence of the coding insert in p73i-RT3:

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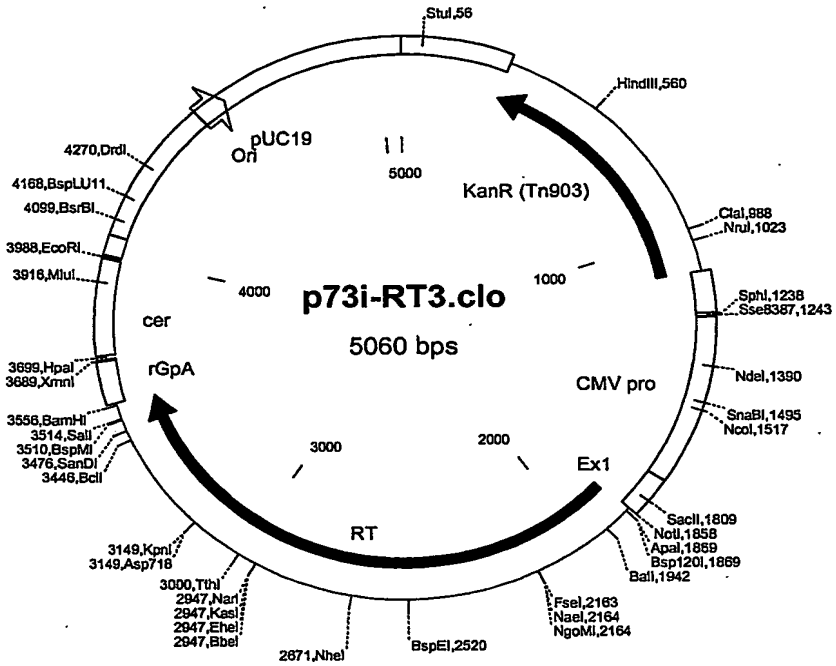
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BalI,1942
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NaeI,2164
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3446,BclI
3514,SalI
3510,BspMI
3556,BamHI
3699,HpaI
3689,XmnI
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3988,EcoRI
4099,BsrBI
4168,BspLU11
4270,DrdI
pUC19
Ori
5000
1000
2000
3000
4000
KanR (Tn903)
Ex1
CMV pro
rGpA
cer
RT
p73i-RT3.clo
5060 bps

Figure 23

CD8, Interferon Gamma ELISPOT Results, from Day 14 C57Bl/6 Mice Vaccinated with Plasmid DNA Encoded with the HPV16 E7 Oncogene.

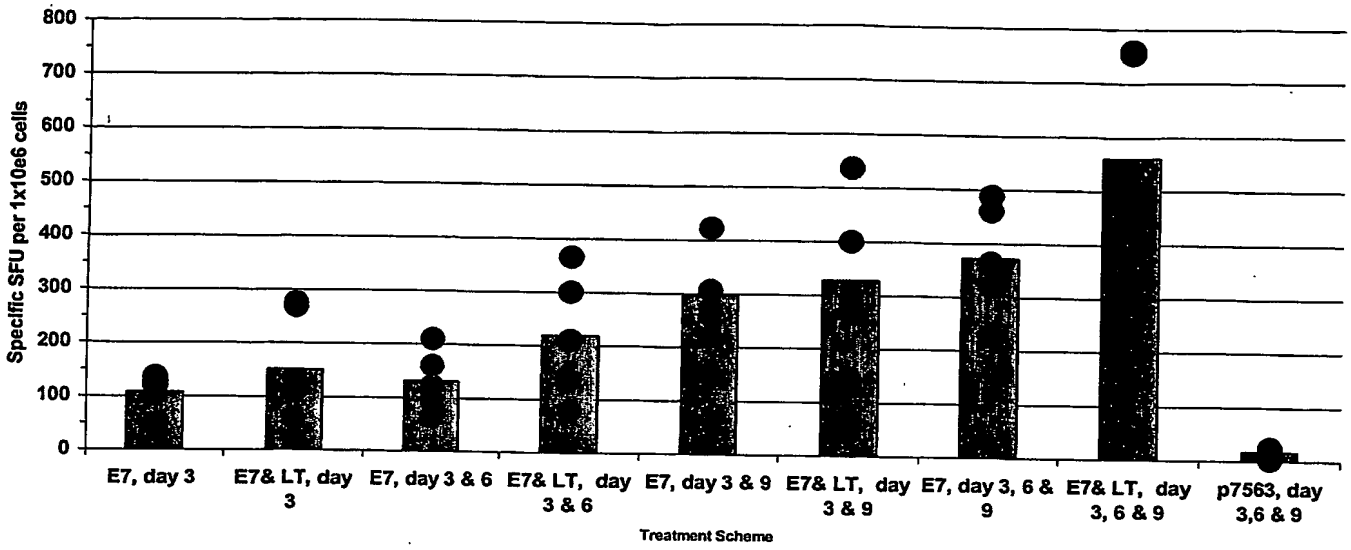


Figure 24

CD4 Peptide, IFNg ELISPOT
E7 DNA Vaccine with and without TC-1 Cells(TC-1#7)

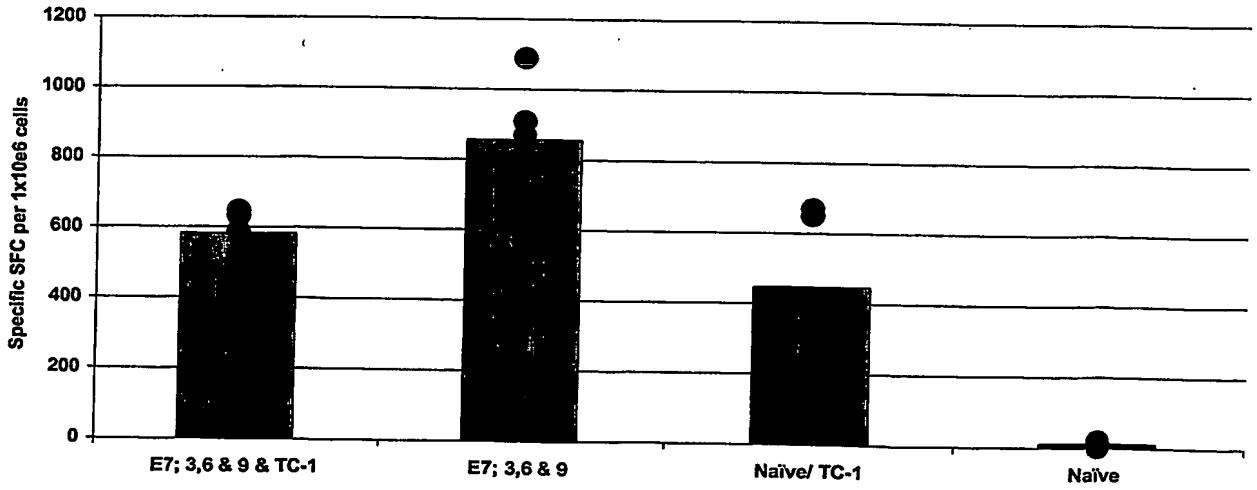


Figure 25

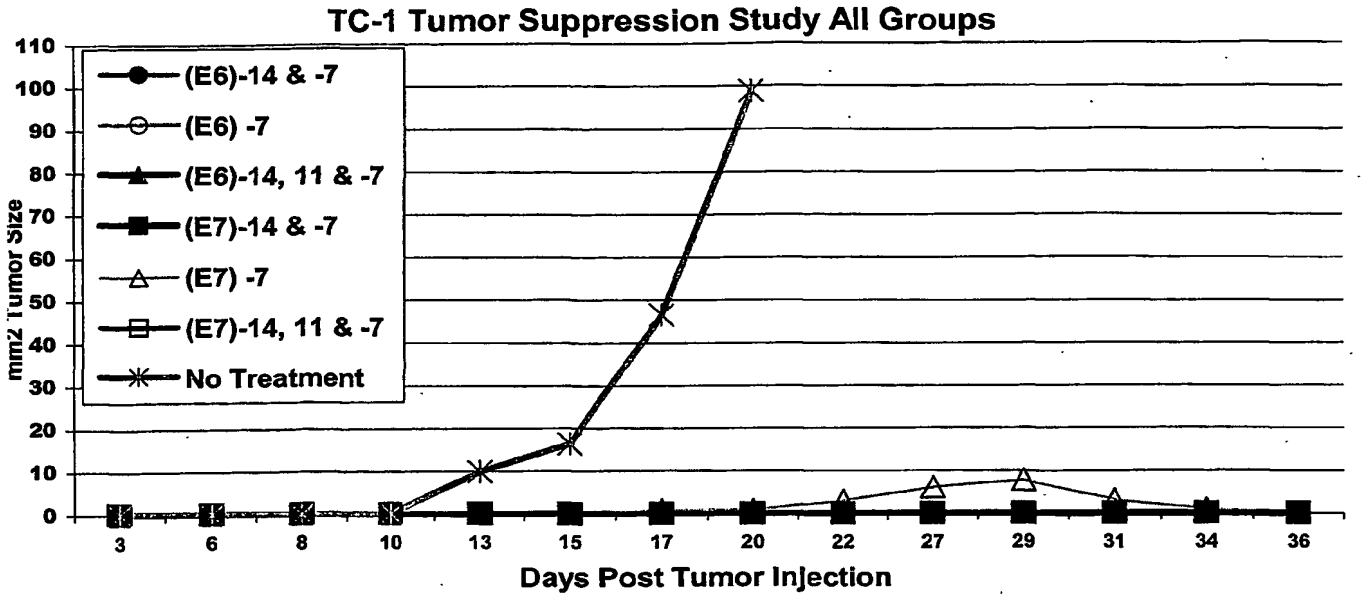
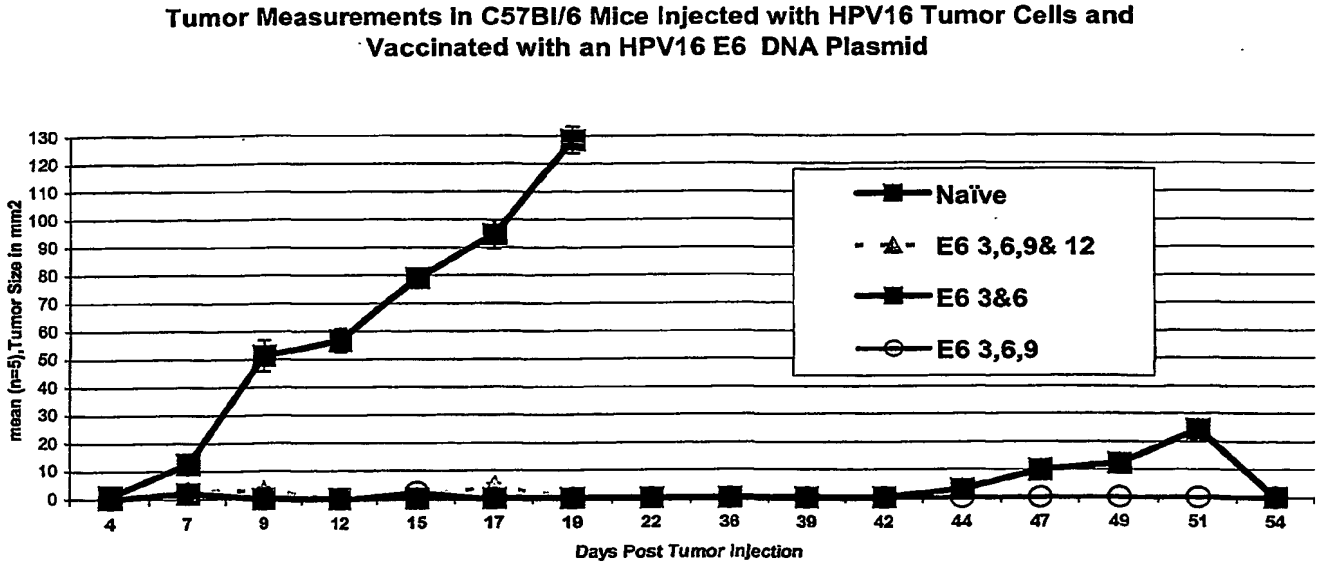


Figure 26



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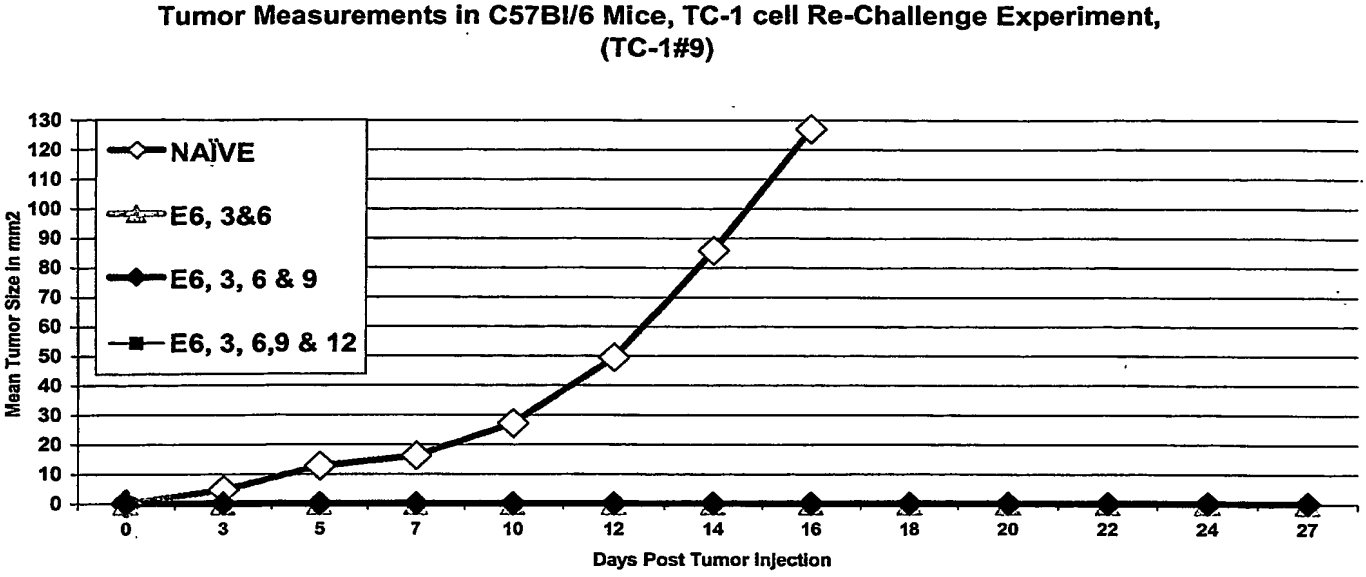
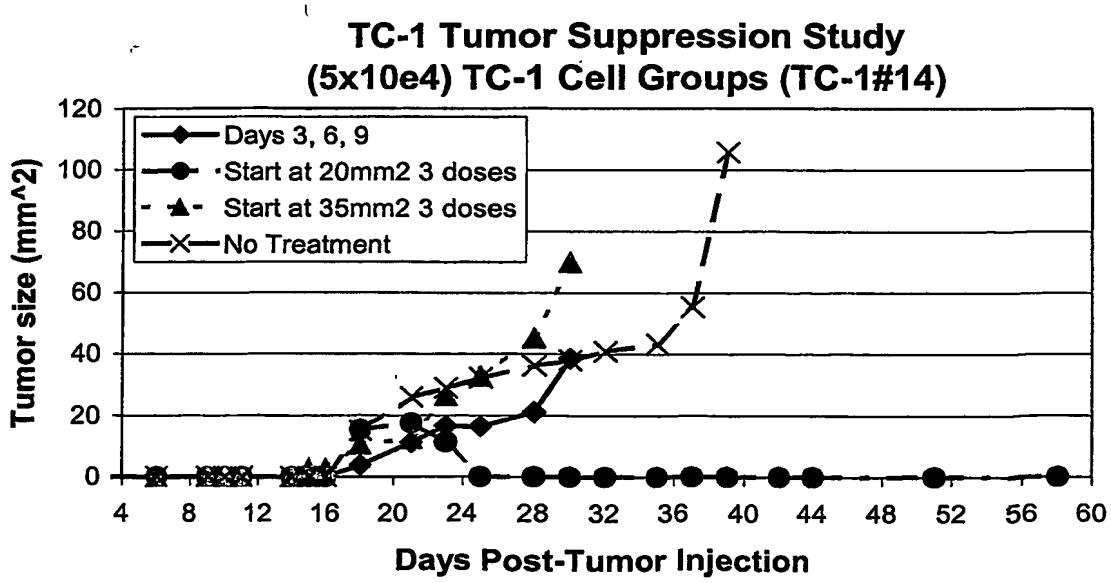


Figure 28



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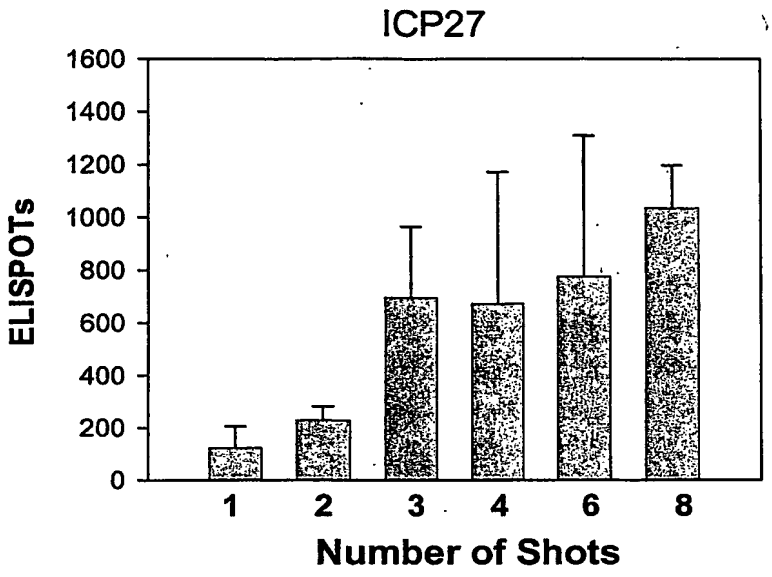
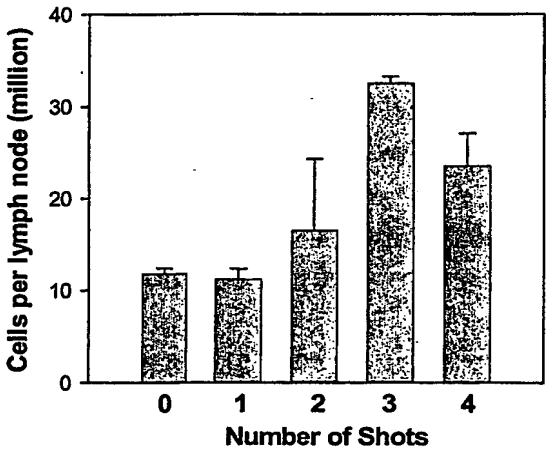
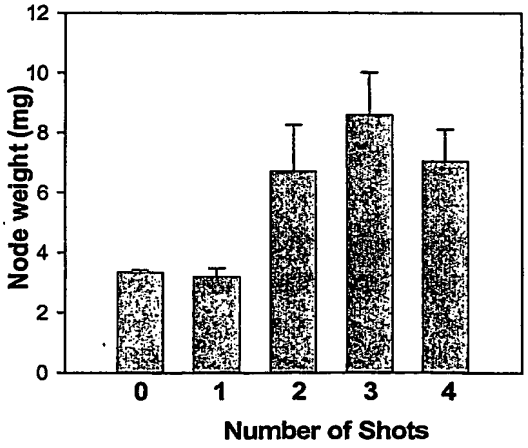


Figure 30





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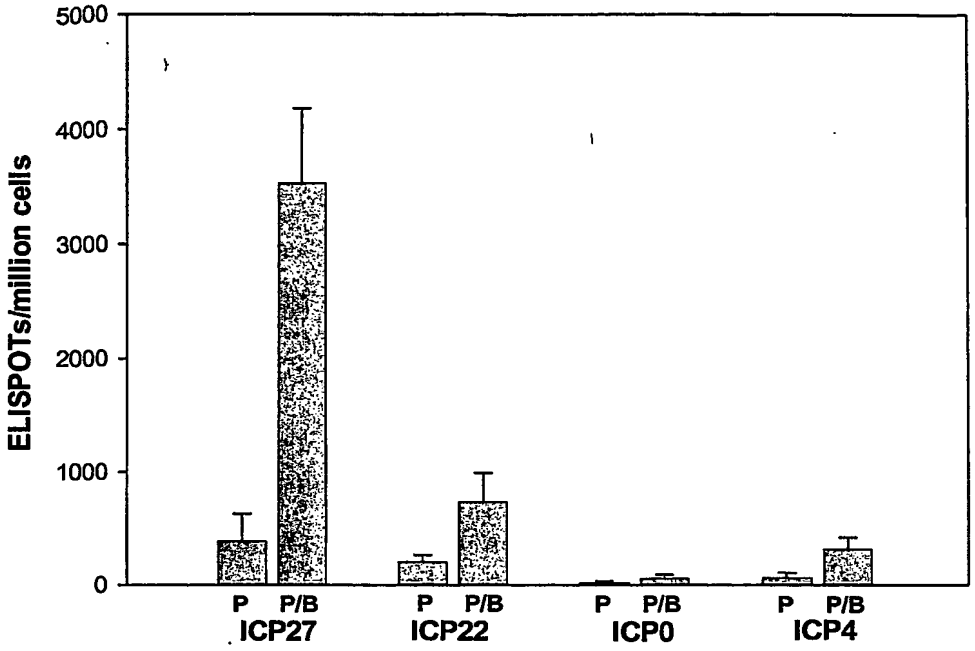

Figure 32

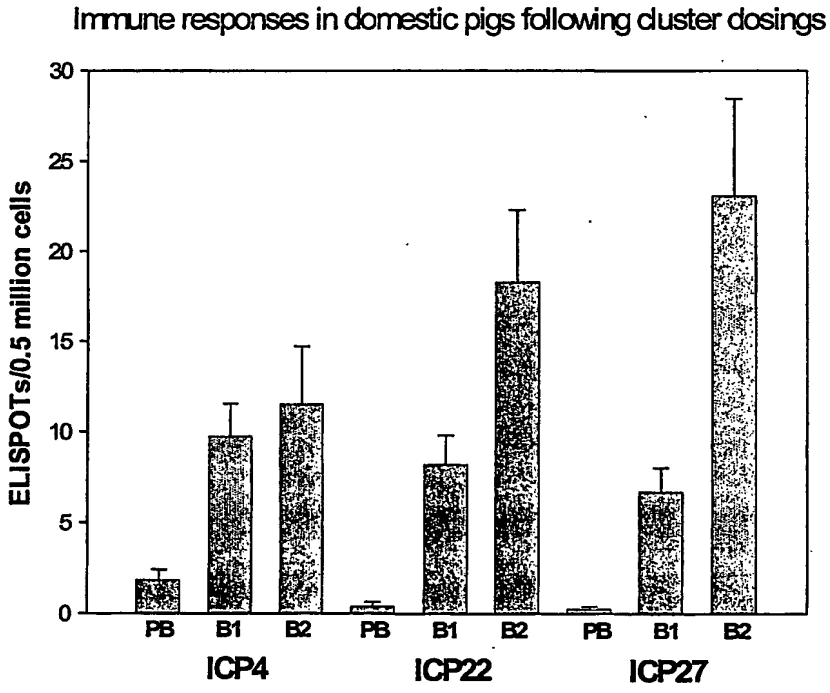

Figure 33

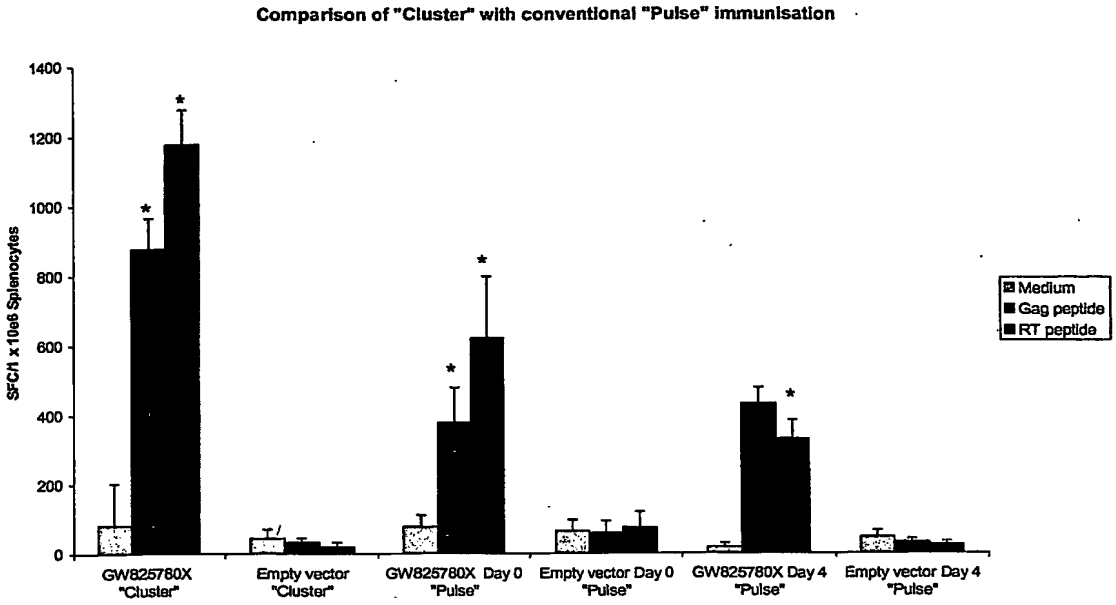

Figure 34

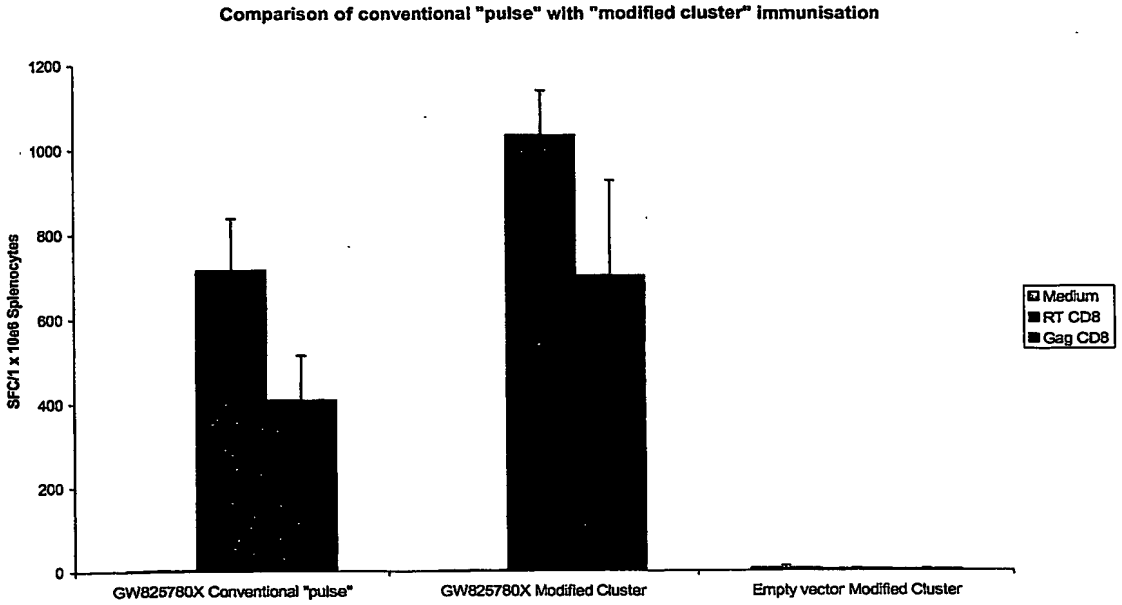

Figure 35

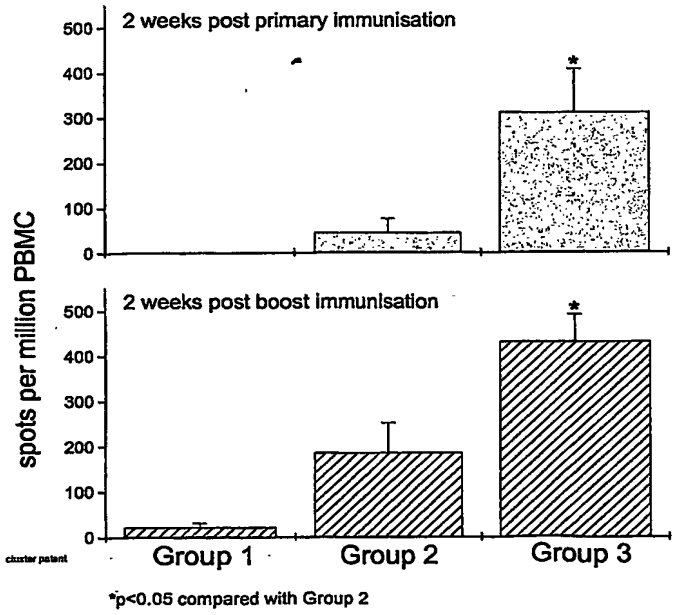

Figure 36

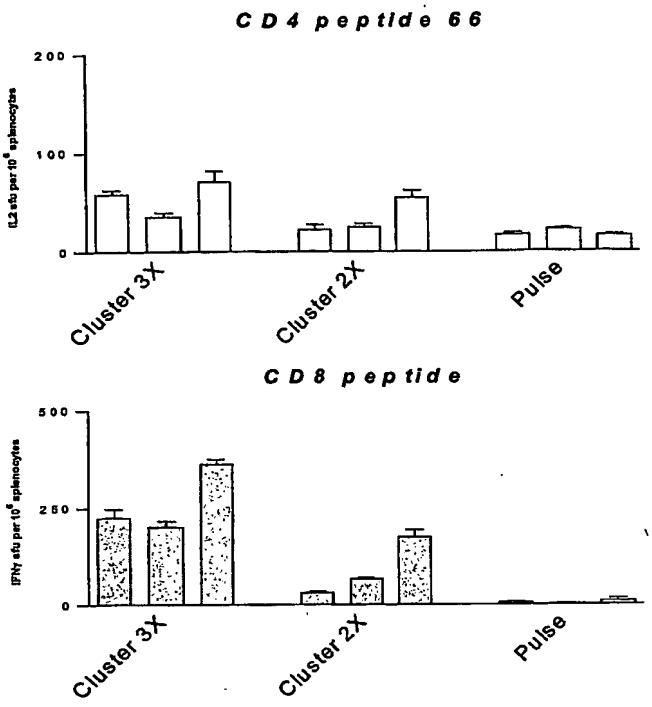

Figure 37

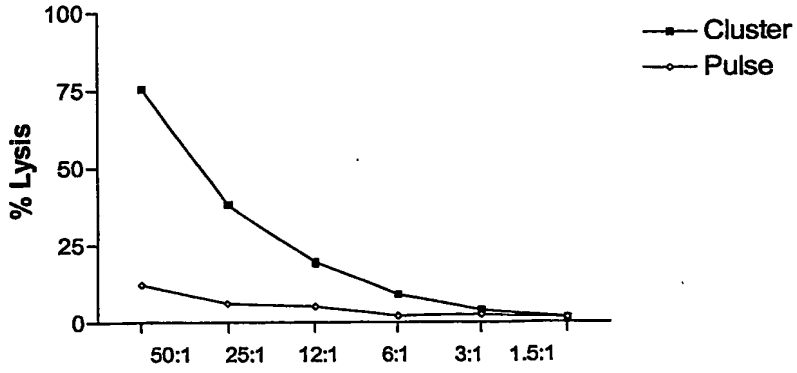

Figure 38

Cluster02